THE FAR EASTERN REVIEW

COMMERCE • ENGINEERING • FINANCE

VOL. V. MANILA, P. I., SHANGHAI, AND YOKOHAMA, OCTOBER, 1908 No. 5.

Judge FRANK B. INGERSOLL
The Pioneer Promoter of the Paracale District

Mr. M. A. CLARKE
President of the Benguet Consolidated Mining Co.

THE PHILIPPINE PLACER BONANZA AT PARACALE

The last twelve months has witnessed a remarkable advance in mining development in the province of Ambos Camarines, Philippine Islands. At this time last year, notwithstanding the unshaken faith of the individuals having the greatest interest in the Paracale district, the outlook was none too bright. Apart from desultory work in a small way, on different quartz prospects, the only genuine activity was manifested in the unrewarded efforts of the men in charge to bring about the successful and continuous operation of the first gold dredge set up in that region.

A strange fatality seemed to follow the career of this dredge which was constructed by the Paracale Gold Dredging Company, Limited. The material reached the ground in February, 1907, and the work of construction began at once. Many unforeseen obstacles developed from time to time, but, at last, in the month of August, the dredge was completed and operations began. It was soon apparent, however, that the apparatus was not adapted to handle the ground for which it was designed and a long shut down followed in order to give the dredge a general overhauling and to remodel the gold-saving devices.

(Continued on page 160)

THE FAR EASTERN REVIEW

GEO. BRONSON REA, M. E.

PUBLISHER

WILLIAM CROZIER, Editor.

COMMERCE :-: ENGINEERING :-: FINANCE

A Monthly Review of Far Eastern Trade, Finance and Engineering, Dedicated to the Industrial Development and Advancement of Trade in the Philippines and Far Eastern Countries

PUBLICATION OFFICE:

MANILA, PHILIPPINE ISLANDS

CHINA OFFICE

KELLY & WALSH, Ltd.

Shanghai

UNITED STATES GENERAL OFFICE:

91-93 Wall Street, New York City

GREAT BRITAIN:

PROBSTHAIN & CO.

14 Bury Street British Museum, London, W. C.

SUBSCRIPTION AGENTS:

HONGKONG	KELLY & WALSH, LTD.
SINGAPORE	" " " "
YOKOHAMA	" " " "
SHANGHAI	" " " "
TIENTSIN	TIENTSIN PRESS, LTD.
WASHINGTON, D. C.	BRENTANO'S.

SUBSCRIPTION RATES: Philippines, United States, Canada, and Mexico, $2.50 U. S. C. per year. To all other countries in the Postal Union, $3.00 per year. Single copies 25 cents, U. S. C.

ADVERTISING RATES will be mailed on application.

Communications pertaining to the Editorial Department should be addressed to THE EDITOR.

ENTERED AT POST OFFICE, MANILA, P. I., AS SECOND CLASS MATTER.

MANILA, SHANGHAI AND YOKOHAMA, OCT., 1908

CONTENTS

	PAGE.
Philippine Placer Bonanza at Paracale	157
Editorials	158
New Publications	160
Benguet Consolidated Mining Company	162
Use of High Grade Ferro-Silicon	163
Philippine Gold Output	164
Tientsin-Pukow Railway Tenders	164
French Tramways & E. L. Co. of Shanghai Tenders	164
The Whangpoo Conservancy	165
The Daiya Mine in China	169
Newly Opened Miike Harbor	169
Manila's Coney Island	170
Philippine Substitute for Lignum Vitae	171
Estimates for American Consular Offices in the Far East	172
Suction Gas Producer Power	173
Far Eastern Company Reports	178
Far Eastern Engineering, Construction, Commercial and Financial News	182
London Metal Market	185
New York Metal Market	185
Hemp Statistics for September	185
Far Eastern Stocks and Quotations	186

AGRICULTURAL LOANS

At a recent meeting of the Legislative Council at Singapore the Agricultural Loans Ordinance was passed authorizing the placing of $50,000 at the disposal of a fund for disbursement as loans to the farmers within its jurisdiction.

Recently the Philippine Government established an agricultural bank with a capital of ₱1,000,000 making loans available to the Filipino farmer along the same lines.

India has carried out a most successful scheme for assisting the struggling farmer almost along the same lines as the Straits Government.

The main object of this paternal attitude of the governments involved is the protection of the farmer from the ever present usurer and at the same time encourage greater enterprise among the agricultural classes who have suffered for lack of funds to carry on their work successfully. While provision is made to meet the demand for money in commercial enterprises little attention has been given the agriculturalist in the Far East as regards his financial needs. He raises his crop someway and manages to deliver it at a nearby market. To finance this most important part in the development of the country's wealth, the far eastern farmer has been driven to the usurer who took more than his pound of flesh. Indeed, the money lender usually reduced the poor farmer to slavery, giving him a stinted living and gathering in almost the entire fruits of his labor.

The avariciousness of the Chetty, the usurer of the Straits Settlements, was made the subject of a speech by Mr. Thornton at the discussion of the Loans Ordinance recently. According to the *Straits Times* he said that he thought "the present state of affairs was a very serious one. And he spoke from personal knowledge. Natives with small holdings were borrowing sums of money from Chetties at ruinous rates of interest, and, as an instance, he cited a case which had been brought to his notice from the State of Perak in which it appeared there was a sum of $200,000 on mortgage of agricultural land, with eleven firms of Chetties trading in the district. To his mind the rate of interest being charged was exorbitant—18 or 20 per cent. And the result was that the holder of the land was practically never out of the clutches of the Chetty. He did not desire to defame the Chetty community in any way, as there were doubtless Chetties and Chetties, and the Chetty trading in the large town was a different person to the Chetty trading in agricultural districts.

"That being the case, it was, he thought, very advisable that the native holder of land should have some other source from which to borrow money other than that of the small lender in the district.

"But the whole Chetty system, he declared, was exceedingly unsound from an economic point of view, because it withdrew from circulation in the Colony large sums of money, the exorbitant rates of interest being collected and remitted to India. They had had, he was almost going to say solemn, warning in Penang recently, where no less than four millions had gone out of the Colony in dealings in tin, with the results that stagnation and depression in trade had occurred.

"He urged upon Government the great necessity at the present time of an agricultural bank, not under the control of Government, but guaranteed by them so far as interest was concerned. In the report it was pointed out by Lord Cromer that the chief difficulty experienced was in respect of the danger that the cultivator might make use of the bank merely to add to his indebtedness. It would be useless if people were allowed to borrow money when they were already indebted to native money lenders. He did not know whether some amendment might not be made to the present Bill in this respect, so that before a cultivator obtained a loan he would have to wipe out his previous indebtedness."

"His Excellency the Governor, in reply, pointed out that the intention of Government was more modest than the hon. member seemed to think. Disbursements would be made by way of loans to agriculturists for improvements to land, the purchase of cattle, or agricultural implements, or any other purposes connected with agricultural objects. All repayments of such loans with the interest due were to be paid into the Agricultural Loans Fund. Their scope was very limited and, after all, the peasantry was also very limited. In Perak and other States a fund was being administered successfully on lines similar to those proposed. Government had no ambition for a great agricultural bank, and he did not know that it would be such a boon to the peasantry as the hon. member appeared to contemplate.

"They knew that, at present, the peasant was not such a thrifty person. He found many occasions for great feasts which were, as a matter of fact, mainly responsible for a large amount of his indebtedness. With the provision of funds for such a purpose the Government had nothing to do, and, he hoped, never would. If a bank was started on the lines suggested all that the management had to look to was a security good enough for the amount. Here Government was going to proceed on purely paternal lines. The peasants were rather a helpless and a thriftless people, and they desired to help and encourage them and perhaps lead them, when they had money, to be more careful than hitherto. The bill, as drafted, followed the lines of a similar measure in India, while the rules were practically identical with those adopted in the Native States, and to a large extent the same as those which the United States Government had been considering for adoption in Manila."

Commenting on the action of the Legislative Council, The *Pinang Gazette* says:

"It is true, as His Excellency the Governor pointed out, in replying to Mr. Thornton, that the intention of the Straits Government with regard to loans to agriculturists is 'modest,' but it is satisfactory to find that even within the limited scope of the Bill just introduced into the Legislative Council the authorities have grasped the principle involved and that they are in earnest in applying that principle to the test. His Excellency was echoing but a truism when he remarked that the peasant is not thrifty; and, while the Government cannot inculcate habits of thrift by force, it can at least—as we are glad to see is its intention—do something in a 'modest' way to free him from the thraldom of the native money-lender whose rates of interest are exorbitant and who takes good care to pocket his interest before parting with the loan. Should it be found that the peasant is not inclined to avail himself of the advantages thus afforded by a paternal Government, then he will only have himself to blame—but we are not so pessimistic as to believe that this will ever come to pass, "helpless and thriftless" as the peasant is, especially on the occasion of a great feast in which his heart ever rejoices."

A résumé of the rules applying to the agricultural loans under the Straits Settlements Ordinance as well as the rules adopted by the Philippine Agricultural Bank may be of interest in view of application of the principle in communities so similar in status and in the character of the people. The rules adopted by the Straits Government follow in part:

1. In these rules "Collector" includes Collector of Land Revenue and District Officer.

2. Every application for a loan shall be made in writing in the Form in the First Schedule hereto to the Collector of the District in which the land to be benefited is situated.

3. The Collector, if satisfied as to the nature of the security offered and as to the objects of the loan, shall forward it to the Agricultural Loans Commissioners, together with a report and a certificate in the Form of the Second Schedule hereto.

4. Upon the receipt of the Collector's repotr, the Agricultural Loans Commissioners may grant the loan.

5. No loan shall exceed fifty per cent. of the value of the security offered.

6. Ordinarily the security shall be a first mortgage on landed property. In exceptional cases, other forms of security may, with the Governor's consent, be accepted.

7. A loan of $100 shall ordinarily be repayable by twelve monthly payments of $8.84 or twenty-four monthly payments of $4.67 or thirty-six monthly payments of $3.28.

8. Except with the sanction of the Governor in Council, no single loan shall exceed $200.

9. An instalment of a loan shall be repayable without demand at the office of the Collector. In the event of an instalment remaining unpaid after the lapse of ten days from the due date of payment, a notice of demand shall be deemed to be duly served if sent by registered post to the address given by the borrower in his written application for the loan. The notice shall be in the form of the Third Schedule hereto, and there shall be payable in respect of it the sum of twenty-five cents which shall be recoverable as though it were part of the loan.

10. All accounts relating to loans under this Ordinance shall be audited by the Auditor-General, who shall, in January and July of each year, submit a report to the Governor in Council.

FIRST SCHEDULE.—FORM OF APPLICATION FOR A LOAN

To the Collector.

SIR:

$\frac{\text{We}}{\text{I}}$ have the honor to apply for a loan under the provisions and subject to the conditions of "The Agriculturists' Loans Ordinance 1908."

2. The amount $\frac{\text{we}}{\text{I}}$ wish to borrow is $

(say dollars) and $\frac{\text{we}}{\text{I}}$ intend, if the loan is granted, to apply the money to the purpose of

3. $\frac{\text{We}}{\text{I}}$ offer as security for the loan

4. $\frac{\text{We}}{\text{I}}$ offer interest at the rate of half per cent. per mensem and propose to repay the entire loan within years by monthly instalments of $

$\frac{\text{We}}{\text{I}}$ have the honor to be,
Sir,
Your most obedient servant,

The rules adopted for the regulation of loans by the Philippine Agricultural Bank follow.

Requests for loans will not be considered, if not made upon the official blank.

Application blanks can be obtained from the Insular Treasurer or any provincial treasurer.

Applicants for loans must answer all questions in the printed application blanks clearly and fully.

The use to which the money is to be applied must be specifically stated, not in general terms.

Loans will be made solely and exclusively for agricultural purposes, namely:

1. For the payment or satisfaction of incumbrances on agricultural lands.
2. For the construction of drainage and irrigation works.
3. For the purchase of fertilizer, agricultural seeds, machinery, implements, and animals to be used exclusively by the borrower for agricultural purposes.

Loans will be made only.

(a) Upon the security of a first mortgage on unincumbered, improved urban property.

(b) Upon the security of a first mortgage on unincumbered agricultural land.

(c) Upon the security of a chattel mortgage to the Bank on crops already harvested, gathered, and stored.

Loans can not be made for less than ₱50.00 nor more than ₱25,000.00.

No loan will be made for more than forty per cent. of the value of the property offered as security.

No loan will be made by the Bank to any person or corporation not engaged in agricultural pursuits.

No loan will be made on property, the title of which is not in the mortgagor.

All buildings of strong materials, and stored crops covered by a mortgage must be insured for the benefit of the Bank.

All expenses of registration of a mortgage shall be paid by the borrower.

Loans can not be made for a period exceeding ten years.

The rate of interest on loans shall be ten per cent. per annum, payable at least once a year.

All applications for loans should be sent to The Agricultural Bank of the Philippine Government, Manila, P. I.

India has been greatly benefited by an extensive and popular system of co-operative land banks and credit societies. In three years these institutions have lent out 37 lakhs of Rupees and still retain 25 lakhs of assets. The agricultural credit societies have a capital of over ten lakhs over half of which has been subscribed by the members and upon which one half the balance has been borrowed from the outside and the balance advanced by the government. The success of these loans may be gathered from the fact that the report shows that not one debt had been written off and a handsome reserve is being built up. Not only is the farmer in India receiving financial aid at reasonable interest but he is managing to get out of the clutches of the usurer who heretofore held him in bondage. In fact, the agricultural banks and societies in India are saving the country by making it possible for the farmer to expend his energy by wise direction to its full limit in the development of the country's inexhaustible resources.

RAILWAYS IN CHINA

The FAR EASTERN REVIEW for September was practically devoted to a résumé of the history of railways in China to the exclusion of practically every other feature. The editor endeavored to cover the subject from the many years' accumulation of data available as accurately as such an exhaustive subject would permit in the limited space available. The many expressions of appreciation received, however, have been gratifying, and especially so in view of the fact that we realize how far we fell short of giving other than an epitome of a comprehensive presentation of this important subject.

The railroad will do more to reconstruct China along modern line than any other element of progress. Her undeveloped resources have not yet been realized by reason of their inaccessibleness so that the initiative of the new empire builders must have for its purpose the construction of lines of communication consistent with the geographical character of the country and its attractiveness in agricultural and other lines of production necessary to give satisfying returns on capital invested, and at the same time introduce the enterprise necessary to its development.

Capital has no nationality. It demands security and a proper return in the markets of the world for its investment. The development of the extensive railway systems of China shall be measured by the security accorded the capital ready for investment and the promise of returns in open competition with similar investment in other sections of the globe. This does not have special reference to foreign capital. It applies equally to Chinese capital. As we said before, capital has no nationality. It trembles at insecurity and demands the highest market quotation. The future development of this feature of China's reconstruction along new lines will be measured by the protection afforded, the encouragement given by the government and the people and the extent of co-operation in every department of activity accorded those who are endeavoring to bring the most inaccessible section of the country in touch with western enterprise.

MINING IN THE PHILIPPINES

A review of the progress made during the year in the development of the different mining properties indicates that those interests are greatly encouraged and that there is prospect of greater activity during the coming year. Few, not familiar with the prevailing conditions in the archipelago, may appreciate the remarkable manner in which the pioneer miners and prospectors have accomplished impossibilities and are slowly winning victory from apparent defeat.

The two mining organizations in Benguet have proceeded slowly but surely in their operations with the result that the future of the companies is bright. The Consolidated started with a three stamp mill and has not only doubled the capacity of the mill, but added an extensive cyanide plant of the most modern equipment. All this improvement has been paid for out of the proceeds of the mine. From the day the first car load of ore passed into the hopper the mine has paid its own way and supplied the funds to treble its original capacity.

The Bua Mining Company has demonstrated its faith in the district by installing a modern plant and while it has not been in operation for a lengthy period, the prospects for its future are bright.

In the Paracale district, seems to have been struck the bonanza of placer mining in the islands. In the résumé of the history of the district in another column will be found the most conservative figures on the output, carefully authenticated by the writer. That the average cubic yard of dirt dredged by the Paracale company produced $1.25 in gold spells 'bonanza' in large letters. Little, if any, placer ground in the world can show such a record on a six-month average. This report of the amount saved may serve to draw a smile from the incredulous, and indeed the management hesitated about giving out the information for that very reason. But the dredge is still working and there is no barbed wire fence around it to prevent the seeker after truth to authenticate the report. There is no stock for sale in any enterprise launched in Paracale so that the publication of the report is not in the interest of the company or its shareholders. It demonstrates, however, that the Philippine Islands are exceptionally rich in gold and that capital well directed by experience may find in the archipelago a most desirable avenue for investment in the development of its mineral wealth, the surface of which has not at this time been more than scratched.

It might be said in passing that the failures in mining projects in the Philippines must be laid to inexperience and unwise direction, and not to the lack of mineral wealth. Evidence of this may be found in Masbate. Thousands have been squandered uselessly through ignorance where wise and experienced direction would have won by this time the greatest possible returns from investment. Those who are trying at the present time to develop Masbate property and demonstrate that consistent and experienced direction is the only requirement to make enterprise pay there, are suffering from the mistakes of those who made the name of Masbate spell 'failure.' Those who have interests in Masbate, however, are not discouraged. They know that once the truth about the deposits of gold there seeps through, their most sanguine dreams shall be realized.

EDITOR DONALD HONORED

The FAR EASTERN REVIEW learns with gratification of the signal honor conferred on Mr. W. H. Donald, formerly editor of the Hongkong *Mail* and one of the most brilliant journalists in the Far East, by His Imperial Majesty, the Emperor of Japan, who was pleased to confer upon him the Order of the Rising Sun, 6th Class, in recognition of his services as war correspondent during the recent unpleasantness. Mr. Donald was special representative of the *Sydney Daily Telegraph*, The *Melbourne Age*, *Adelaide Advertiser*, the *China Mail* and the *London Express*. He recently accepted the position of special correspondent of the New York *Herald* in China.

ANGLO-AMERICAN PENNY POSTAGE

The introduction of the two cent an ounce postage rate on letters between any part of Great Britain and Ireland and the United States, on October 1, was another step in the direction of closer union between the two countries. Congratulations are in order for the large share taken by Mr. Henniker Heaton in the preliminary educational campaign which is really responsible for the reduction of postal rates generally, and also so richly deserved by Mr. Buxton, the British Postmaster General, and Postmaster General Meyer of the United States. In bringing about this important step in the direction of eliminating international postal boundaries, the heads of the two departments worked most harmoniously. With this important arrangement, there has been set an example that will surely be followed by all the commercial nations and with the result that the penny stamp will accomplish more for the establishment of amicable international relations than all the conferences at the Hague.

The American press is unanimous in endorsing the new arrangement, and, with reason, for it places the advantages of penny postage to almost every part of the globe. For instance from the American viewpoint, a two-cent postage stamp will carry a letter to any point in Alaska, Panama, United Kingdom, Mexico, Canada, Hawaii, the Philippines, Shanghai, Tutuila, Guam, Porto Rico and Cuba from any point in the United States. This is a large circuit for the American domestic postage stamp.

This last agreement is one of the very greatest importance since there is little doubt but that Germany and other countries will soon realize the advantages of the penny postage. In short, the next decade should see the penny postage stamp obliterate all postal frontiers.

THE LATE BARON IWAZAKI

Commenting on the death of the late Baron Iwazaki, the *Japan Financial and Economic Monthly* says:

"On March 26th, we have to note the death of Baron Iwazaki, the creator of the enormous wealth of the present Iwazaki family, and of one who has contributed a great deal towards the cause of the country. The Baron was not yet 60 years of age, and his death at this period is to be regretted by all. Through the efforts of this distinguished personage, the Mitsubishi firm and the Nippon Yusen have been brought into existence which have greatly added to the weight of our country. In giving a description of the Baron, we must quote the words of Prince Ito and Count Okuma. According to the former, the Baron was noble in character and keen in foresight and never followed others for the sake of following. Assisting his nephew, he accomplished much towards the cause of the Iwazaki family. Count Okuma says, 'He was a man of strong will and resolution and has accomplished much that ordinary men fail to do, but it is to be regretted that chance was not given him to work for the cause of the country on a larger scale.' With the death of Baron Iwazaki, we have indeed lost one of the most remarkable men that our country has ever produced.

"The following is an epitome of his biography. The Baron was the second son of Iwazaki Yajiro, and the younger brother of Iwazaki Yataro. He was born at Inokuchimura, in the province of Tosa. In the 4th year of Meiji, he removed to Osaka where he studied the Chinese classics under Shigeno Seisai. The next year he went to America to prosecute his studies. After he came back to Japan he was made vice-president of the Mitsubishi Co. After his elder brother Yataro, who was the president of the Company, died, he took the chair of president.

"In September of the same year, the Mitsubishi Co. and the Kyodo Unyu Kaisha (Mutual Transportation Company) amalgamated, and the present Nippon Yusen Kaisha was organized. He established the Mitsubishi-sha and opened the business of mining, ship-building, and banking. In September of the 23rd year, he was appointed a member of the Upper House. In the 24th year of Meiji, he was relieved of his membership in the Upper House at his own request. In the 26th year of Meiji, he established the Mitsubishi Stock Company in accordance with the new code of commerce. In the 29th year he was given the title of baron and ranked in the class of Nobles. In the same year, he became president of the Bank of Japan."

NEW PUBLICATIONS

Irrigation: Its Principles and Practice as a Branch of Engineering, by Sir Hanburr Brown, K. C. M. G., Member of the Institute of Civil Engineers, late of the Royal Engineers, has reached our desk from the presses of Messrs. Archibald Constable & Co., Ltd., London. The volume is a comprehensive work on irrigation and is based on the experience of British engineers in connection with the successful irrigation systems in Egypt and India. The work is profusely illustrated and leaves little unsaid of value to engineers to guide them in the installation and direction of similar undertakings. The standard works on irrigation from the view point of the engineer were freely consulted by the author and the volume offers all that is most important as a book of reference. It will be of greatest value to engineers of the Far East for the reason that it deals with the many problems to be solved in the installation and operation of irrigation systems in Oriental lands. The present decade has seen extensive development of irrigation works and few governments are neglecting the encouragement of this kind of enterprise that makes for marked enhancement of agricultural lands and increase in production which after all is the wealth and backbone of any country. For sale at Messrs. E. C. McCullough & Co., Manila, P. I. Price $5.00 U. S. C.

Railway Track and Track Work, by E. E. Russell Tratman, A. M. Am. Soc. C. E.; Mem. Am. Ry. & M. of Way Assoc.; Associate Editor of the *Engineering News*, appears in its third edition fully revised and issued from the presses of The Engineering News Publishing Co., New York. The work needs little introduction as the first and second editions have had wide circulation and this edition was conceived only after all the former ones were exhausted. This work has been brought up to date, and, besides additional illustrations, an appendix has been added setting forth the statistics of the details of track construction on a number of leading American railway systems. The index containing the names of leading engineers, inventors and authorities quoted in the work is of itself the foundation for a complete library on this important subject. It must be admitted that no more comprehensive volume covering the subject to date has been published during the year.

Road Preservation and Dust Prevention, by William Pierson Judson, Consulting Engineer and author of *City Roads and Pavements*, is received. The volume is devoted to the problem of eliminating the dust menace to health which prevails on macadam roads particularly. It contains a résumé of the experiments of engineers in almost every country in the world and the recommendations made are based on the best experience of years of study of the important problem. The volume will be read with interest by every municipal engineer and official and will serve to reduce the danger from one of the most persistent methods of germ conveyance. The Engineering News Publishing Co., New York.

THE PHILIPPINE PLACER BONANZA AT PARACALE

(Continued from page 157)

Finally in November, 1907, dredging operations were resumed with prospects seemingly bright. Unfortunately, the "Hoodoo" was not shaken off so easily. The wheels of the remodelled dredge had not been moving over sixty hours before the boiler collapsed, the accident being due to a defective plate. This climax in discouragement was sufficient to break the spirit of the average enterprise, but the individuals behind the dredging venture were game and stuck to their task. It took another five months to procure a new boiler and put the dredge in shape to resume operations.

The big buckets began to churn up the dirt again in April of this year, but there was about a month consumed in preliminary work before a well could be dug and a face blocked out to work against. But from the first of May success has been written in big letters and emphasized with every turn of the buckets. The shipments of bullion have been regular, and even the worst "Doubting Thomas" in Manila is beginning to yield to the evidence of his senses—the sight of the yellow metal.

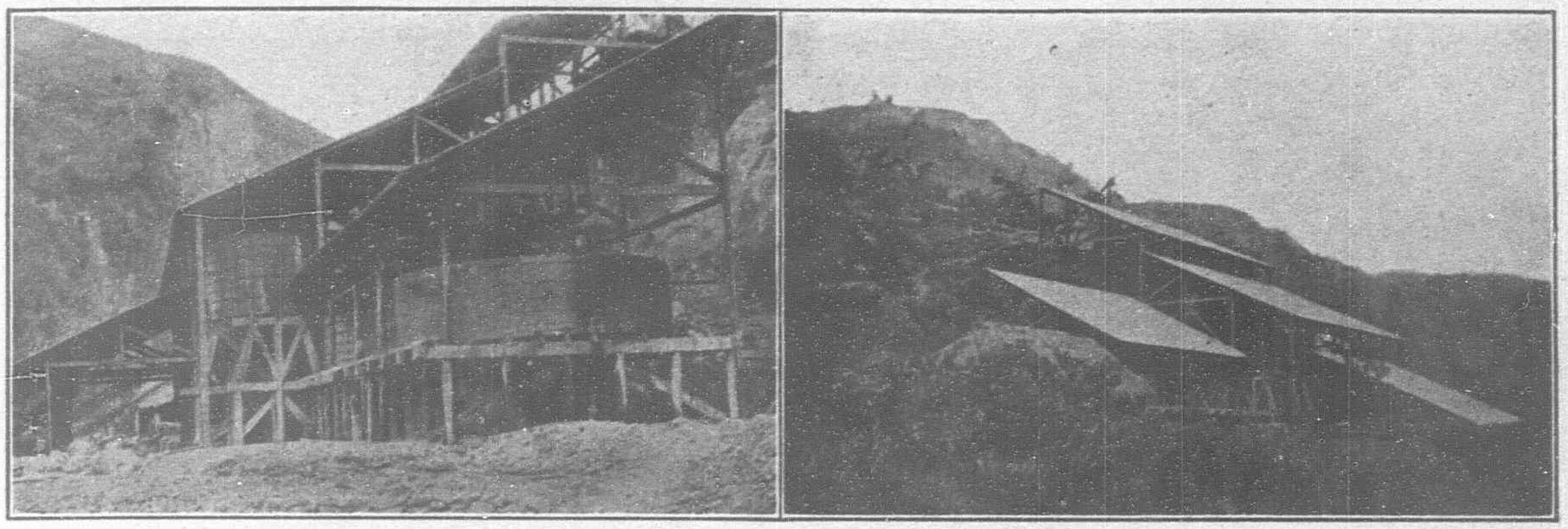
It is well authenticated that during the past five months, the gold won by this dredge has reached approximately the sum of ₱80,000 in value, and during the months of September and October there was a shut down for a period of six weeks for general repairs and changes in the gold saving apparatus. This cuts the actual operating time to about three and one-half months with six working days to the week. This means a product of nearly ₱23,000 a month or ₱275,000 a year.

However, this splendid showing has not been reached without overcoming many obstacles. There are several heavy handicaps to be found in the nature of the ground worked. At times there is considerable clay brought up which is very difficult to break up and so has a tendency to carry off the gold values. Another puzzling point is the presence of a large percentage of black sand which carries the fine gold with it to such an extent that the sand must be saved for treatment in order to win the gold. So much of the sand is dredged up that it speedily swamps the "tables" and necessitates slow working—far below the bucket capacity of the dredge and frequent "clean up." The amount of ground handled has not averaged 300 cubic yards per day of 24 hours. The average amount saved per cubic yard during the operations of the dredge was approximately ₱2.50 or $1 25 gold. This is a remarkable showing and may be fully authenticated. On an average two tons of black sand are saved daily.

One very remarkable feature developed in the operations was the bringing up from the bed of the river, each day, from ten to twelve tons of soft, free-milling sugar quartz. There has heretofore been no apparatus to handle these by-products, but the dredging company is now erecting a tube mill to crush the black sand and quartz of which several hundred tons have already accumulated. The management confidently expects that the output of this mill will increase the product of the dredger by from 50% to 75% of the present figures.

The undisputed success of the Paracale dredge has given a big impetus to mining in the district—as well to quartz mining as to dredging. Quite recently there was organized a corporation known as the Philippine Gold Dredging Company the entire capital stock of which was subscribed by residents of the Philippines and work is being pushed on a dredge which is expected to be ready for operation not later than February of next year. More than half of the stock of this new company was taken by parties living in the province of Ambos Camarines and the balance in Manila.

This company has acquired a large parcel of placer lands from the individual owners which borders directly on the tract being worked by the Paracale dredge now in operation and gives every indication of carrying a continuation of the same alluvial deposit. No pains or expense are being spared to make the new enterprise a success. The Risdon dredge, formerly on the Guinobatan River, Masbate, was purchased and is now being moved to Paracale. However, entirely new pontoons are being constructed and every doubtful or worn part of the machinery is being renewed by the best material from America so that the dredger should in every sense of the word be "as good as new." It is also expected to procure a high class dredging expert from the United States to take charge of the work.



VIEWS OF BUA MINING CO.'S MILL AND CYANIDE PLANT. THIS COMPANY IS COMPRISED OF ENGLISH AND AMERICAN BUSINESSMEN OF MANILA AND HONGKONG AND HAS BEEN CARRYING ON DEVELOPMENT WORK FOR THE PAST TWO YEARS ON A GROUP OF 36 CLAIMS

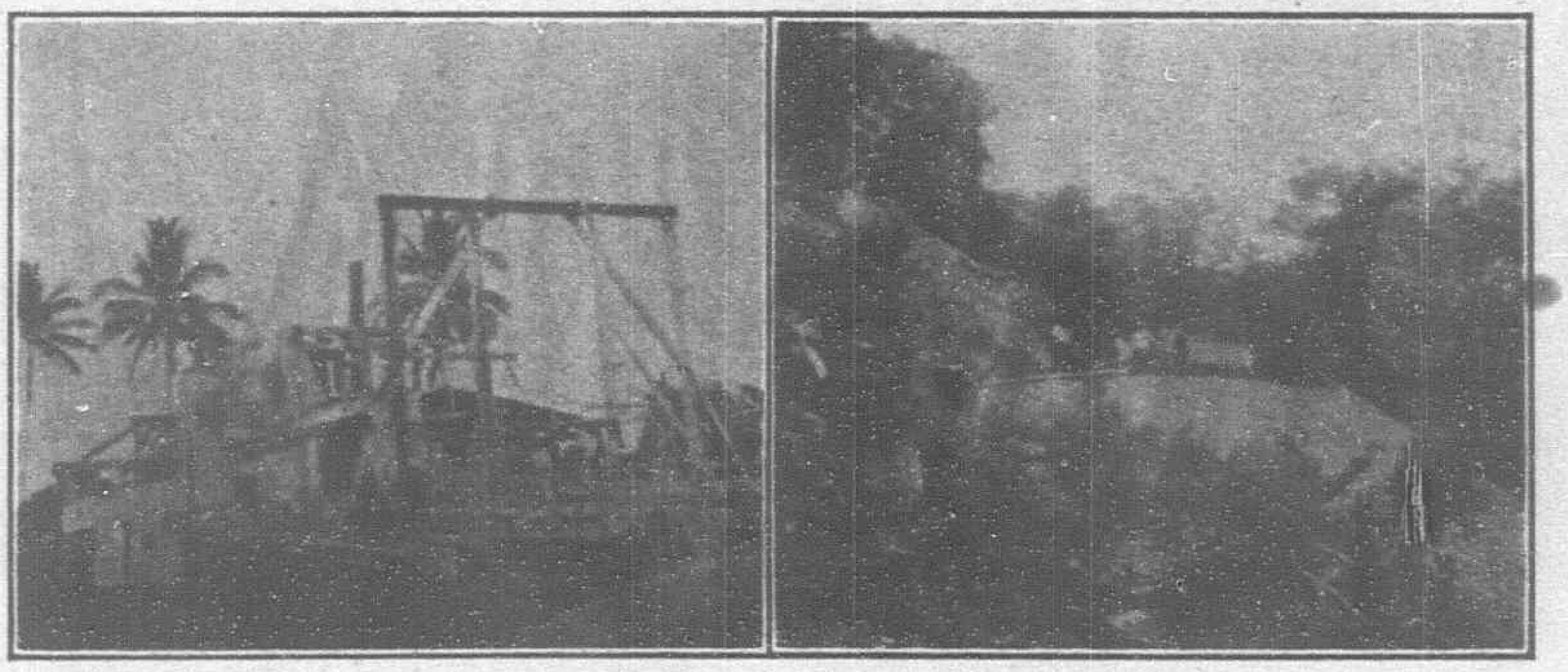
This new venture is something of an innovation in the Philippines as it will be what might be termed "dry land dredging." All of the ground to be worked is removed from any stream and in many parts is covered by cocoanut groves. Careful tests, however, have been made which demonstrated that underneath there is an ancient river bed which carries a rich pay streak.

The outlook in the dredging line does not stop here. Within the last few days there has arrived in the islands from New Zealand, a dreging expert who was interested in the installation of the Paracale dredge. He announces that he has arranged for sufficient capital to install another plant and will have his dredge on the ground and in operation at the headwaters of the Paracale River by the end of the year.

On the Malaguit River, a short distance from Paracale, boring tests have been going on for several months with most satisfactory results. Here there is a large area of dredging land under option to outside capital and in view of the values shown by the tests, it is believed that the year 1909 will see one or more modern dredges installed on the river.

Preliminary prospecting and testing are also being carried on various other streams and conservative estimates indicate that the next four years will see one of the most active dredging districts of the world in the vicinity of Paracale.

Nor has the quartz mining in the district been neglected. The famous old Tumbaga mine, the working shaft of which has been filled with water and debris for twelve years is being cleaned out and, at the time of writing, the working levels have probably been reached. The English Syndicate that formerly held the property thought so well of it that on the machinery alone they must have spent upwards of £10,000 just before the outbreak of the Philippine Insurrection in 1896 which necessitated the suspension of active operations. Much of the old equipment is still in good condition and has been utilized in the process of cleaning out the mine. The objective point is the old working level at a depth of about 100 feet. Years ago a considerable amount of very high grade ore was taken from the old working and if a small part of the stories be true, it will prove well worth the working. However, the present owners are accepting nothing as settled and are cleaning out the property in order to make a thorough test with samples with a view to determining whether the further development of the property and installation of the necessary equipment is warranted. If the values are found there, active operations will begin at once.



VIEWS OF PARACALE RIVER DREDGE AND SAN MAURICIO DUMP

At Mambulao, a few miles from Tumbaga, is another property known as the San Mauricio mines which were held by the same English Syndicate. Here more than 1500 feet of old workings, which were completely filled up by slides, have been cleared out and retimbered since the first of the year. Recent advices from New York are to the effect that financial arrangements have been completed which ensure the erection of a twenty stamp mill at the mine within the next six months.

The entire district of Paracale and Mambulao is heavily mineralized and the mining possibilities seem unlimited. At different points there are a large number of quartz claims in a more or less advanced stage of development and everywhere there is a healthy activity manifested.

At present there are actually engaged in mining operations in the district some 25 white men and 150 natives. This does not include a considerable number of native women who are working "panning" the different streams; nor does it include a considerable force of Chinese carpenters sent from Manila to work on the hull of the dredge which is being erected.

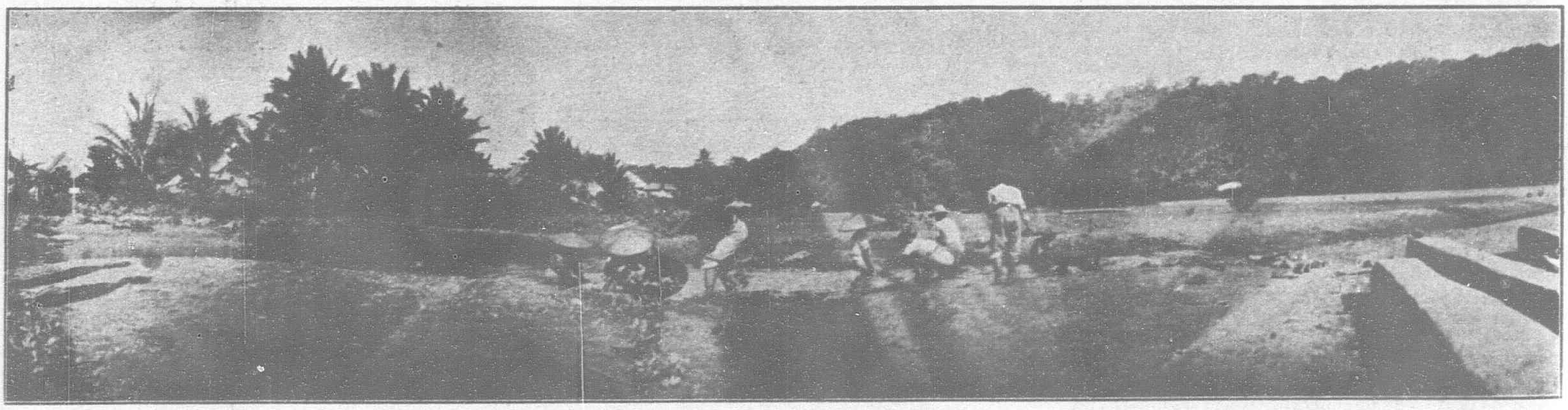
One serious burden to the Paracale miners is the cost of transportation from Manila. Occasionally an inter-island boat will put into the bay off the mouth of the Paracale River and lighter cargo. But it is only during a part of the year that this can be thought of on account of the exposure to the North-western monsoons with full sweep of the Pacific behind it. In consequence most of the freight and passengers must be landed at Daet, twenty miles distant, and sent up the exposed coast by small boats to Paracale.

The Malaguit River, which is a stream of considerable dimensions, is readily navigable for some distance by inter-island boats and there is a fine anchorage about three-quarters of a mile above the mouth. Just below this point there is a sharp bend in the river and a range of hills affords complete protection from the monsoon. However, just at the mouth of the river two barely submerged rocks in the middle of the stream are a great menace to navigation. It is possible for a steamer to creep around the rocks and it has been done a few times in the past, but the tide runs very strong and the risk so great that steamer captains are unwilling to undertake the feat.

With the rocks removed, a safe harbor would be furnished all the year round. Recently the government interested itself in this matter and a survey party is to investigate the conditions with a view to making a report on the feasibility and the cost of clearing out the channel. With these obstacles removed, Malaguit will become a regular port of call for the Manila steamers.

Some idea of the character of the pioneer mining men of Paracale may be gathered from the fact that those interested in the development of that section have banded themselves together in the form of a society known as the Paracale Miners' Association which has for its object the furthering of the interests of mining men in the Paracale district. The meeting was held on October 3rd and two committees were appointed to draft constitution and by-laws and the second to arrange for proper headquarters. The following were elected:

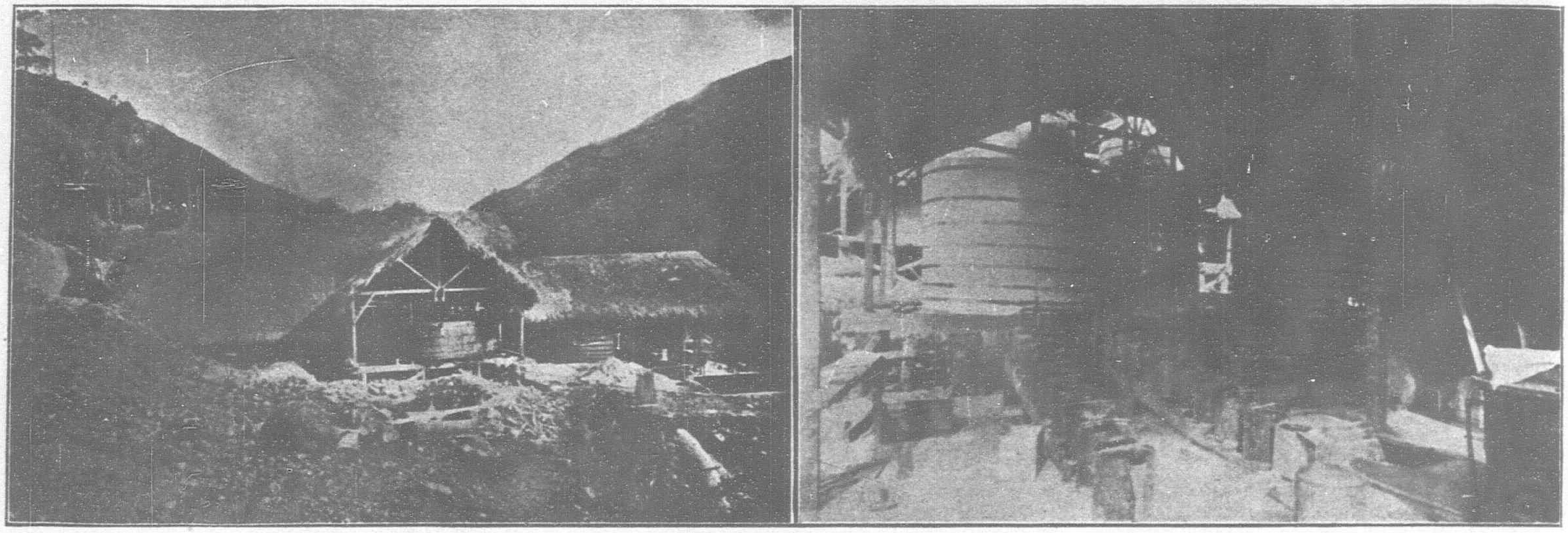
A. J. MacDonald, president; Wm. Kane, 1st vice president; G. Armstrong, secretary and treasurer; Directors, E. R. Simpson, W. Pearson, and J. S. Gillis.



NATIVES PANNING GOLD ON THE PARACALE

THE BENGUET CONSOLIDATED MINING COMPANY

The Benguet Consolidated Mining Company, the pioneer organization in the promising gold mining district of Benguet, is now operating two mills with a capacity each of three stamps with returns most satisfactory to the shareholders who have from the beginning of operations reinvested the net receipts in developing the property and increasing the capacity of the plant. The latest report from the mines controlled by this organization shows a monthly output of about 350 ounces valued at ₱12,600. The monthly expense, exclusive of development, averages about ₱6,000. The net returns make a handsome profit on an investment, in all to date, of ₱302,791. Out of the net receipts, however, an average monthly expenditure in increasing the capacity of the plant of about 4,000 pesos has been the policy of the company. About 900 tons of rock are milled monthly averaging about ₱14 a ton in gold saved.



CYANIDE PLANT OF THE BENGUET CONSOLIDATED

In addition to the stamp mills, the company has a cyanide plant with a capacity of 60 tons, and this equipment has been brought to a high state of efficiency. An agitating plant was recently added and concentrators and a filtering system, used successfully in Australia, are now being installed. These additions will make the cyanide plant most effective in securing the greatest possible returns from the slimes. The cyanide plant capacity is also being increased by 50%.

The plant is situated on the Minnesota claim, the principal one of the group of eleven rich claims controlled by the company. The ore is carried to the mill by means of a gravity tramway 70 feet in length and from it the ore is dumped into the mill. The plant is operated by water power, in connection with which a new steel flume one mile long and 18 inches in diameter was recently installed to carry the water to the mill. Superintendent Eye in his last report stated that there were $375,000 gold worth of ore blocked out and the tunneling concluded exceeds 5,000 feet. The company is now constructing a drain tunnel on the lower level which will also serve as a means of egress for the ore sunk underneath the creek. The principal work has been done on the Minesotta claim and includes the main tunnel on the upper level winzes to the lower level and crosscuts drifting parallel with the main tunnel. Three sides have been blocked but the work below the wenzes had to be stopped on account of the rainy season.

The installation of the plant is of a permanent character. It is all under iron and built with a view to withstanding the serious storms in that vicinity. The recent typhoon, which did so much damage in that section, made no impression beyond blowing off a couple of exposed belts.

The officers of the company are: President, M. A. Clarke; Vice-President, H. C. Clyde; Secretary and Treasurer, J. H. Seifert; Directors, M. A. Clarke, W. L. Blackett, H. C. Clyde, J. H. Seifert, N. Peterson, J. W. Haussermann and Fred C. Fisher.

THE USE OF HIGH GRADE FERRO-SILICON

The successful use of high grade Ferro-Silicon, say 25%, 50%, and 90%, and its advantages have been demonstrated. The Sino-Engineering Syndicate of Shanghai, the sole agent for China, has issued some interesting circulars on its use which are of interest to the managers of foundries and steel works.

Silicon, as an essential ingredient of the various products of the metallurgical industry, is of the highest importance on account of the qualities which it imparts to those products.

GROUP OF PARACALE MINERS AND DREDGERS.—THE SAN MAURICIO TUNNEL

The use of Ferro-Silicon is based on the properties of Silicon.

Until quite recently Ferro-Silicon was made in the blast-furnaces only and the highest percentage of Silicon obtained did not exceed 14%.

A few years ago, however, a new product was discovered—the high grade Ferro-Silicon, which is manufactured by an electrolytic process. This product competes successfully with the low grade Ferro-Silicon and will undoubtedly, in a short time, entirely replace the latter.

The fact that the consumption of high grade Ferro-Silicon has quadrupled within three years and now amounts to thousands of tons per annum clearly indicates the superiority of high grade over the low grade Ferro-Silicon.

The properties of high grade Ferro-Silicon and the advantages it possesses over the low grade vary with the manner of its employment.

There are two principal fields of application of Ferro-Silicon:

I. In the Foundry.

II. In the Steel Works.

I.—*The application in the Foundry*:—The low grade Ferro-Silicon is, in general, but little employed in the foundry. When used it is added to the charge of the cupola in order to increase the percentage of Silicon in the cast iron. This mode of employing Ferro-Silicon is, however, rare and usually the desired percentage of Silicon in the cast iron is obtained by a corresponding choice of the charge of the cupola.

With the high grade Ferro-Silicon, however, the position is entirely different and the employment of this product in the foundry which is, naturally, of quite recent date, seems likely to revolutionize foundry-processes.

The high grade Ferro-Silicon, which easily dissolves in molten cast iron, is added in the ladle while the iron is being tapped from the cupola, the quantity being regulated by the percentage of Silicon desired.

It is possible to obtain with one charge of the cupola the different kinds of cast iron, suitable for the different classes of castings. White pig iron, which is of but little use in the foundry, may be transformed into a suitable material by adding high grade Ferro-Silicon in the ladle and in this manner all the good qualities of white pig iron such as purity, strength and fine grain contribute largely to the quality of the finished product.

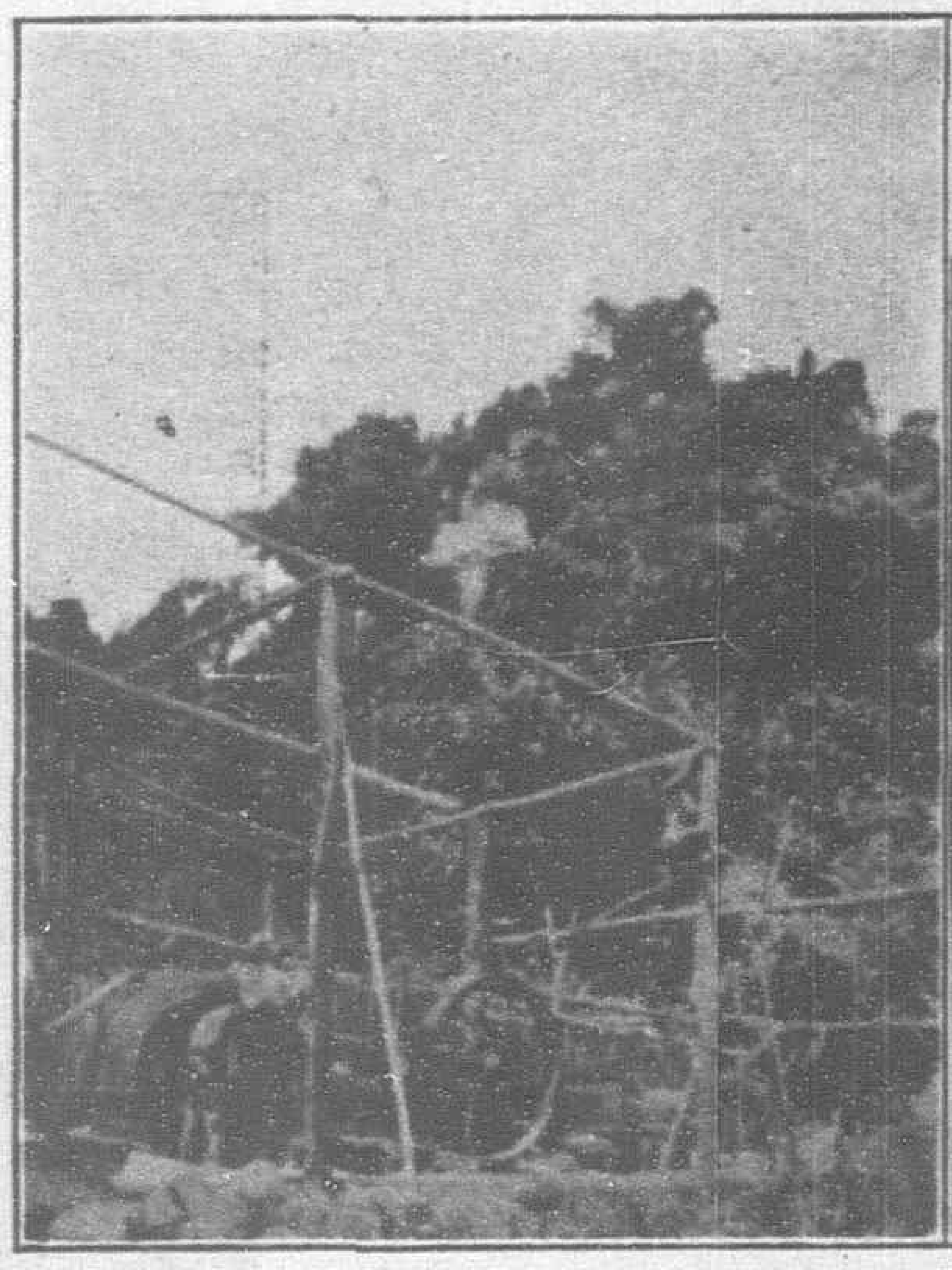
From tests made, it has been proved that the addition of high grade Ferro-Silicon in the ladle not only facilitates the proper machining of the castings, but also considerably increases the strength and ductibility of the material.

For foundry purposes we recommend the 75% Ferro-Silicon which, compared with the other grades, dissolves best in molten cast iron.

II.—*The application in steel works*:—The use of high grade Ferro-Silicon in Steel Works which is more common than in the foundry, is based on three principal properties of Silicon:

1.—Its influence on the quality of the Steel, which is manifested by greater strength and elasticity.

2.—The capability of Silicon to absorb the gas and thereby render the steel very compact.



HOIST MACHINERY, TAMBAGA MINE

SHAFT HOUSE, TUMBAGA MINE

3.—The calorific effect it produces during oxidation.

Before the high grade electrolytic Ferro-Silicon became known, the low grade Ferro-Silicon, from 10-14% was in general use. This product, unfortunately, contains, besides Silicon, important quantities of Carbon, Manganese, Phosphorus and Sulfur and to the fact that the high grade Ferro-Silicon contains these ingredients in much smaller quantities, may be attributed the preference for the high grade Ferro-Silicon, which was quickly shown by steel works.

It is evident that the finished product will be of greater purity when high-grade Ferro-Silicon is used, not only because the high-grade Ferro-Silicon itself is much purer than the low-grade, but particularly on account of the fact that the quantity of Ferro-Silicon added will be much smaller.

Another disadvantage in employing low-grade Ferro-Silicon is that it is necessary to heat it before adding it to the steel bath, in order to prevent too great cooling of the latter.

In the open hearth system, when there are no special heating stoves, it is the usual practice to heat the Ferro-Silicon on the door sills, and in the basic Bessemer system, for the manufacture of steel rails, the Ferro-Silicon is melted with the Spiegel iron in the cupola.

In all these systems great losses of Silicon are inevitable on account of the Silicon being very apt to oxidize.

The high grade Ferro-Silicon does not require to be previously heated, but may be added in the ladle without loss of Silicon, by reason of its great solubility in the steel bath and of the small absorption of heat.

In employing high-grade Ferro-Silicon, especially in the open hearth system there is a considerable saving of time compared with the use of the low-grade, which requires some time for melting and mixing in the steel bath.

When introducing the low-grade Ferro-Silicon in the stove, it is besides necessary to add a greater quantity than is required, in the finished product, to provide for the loss of Silicon by oxydation and, furthermore, there is a danger of rephosphoration of the steel bath.

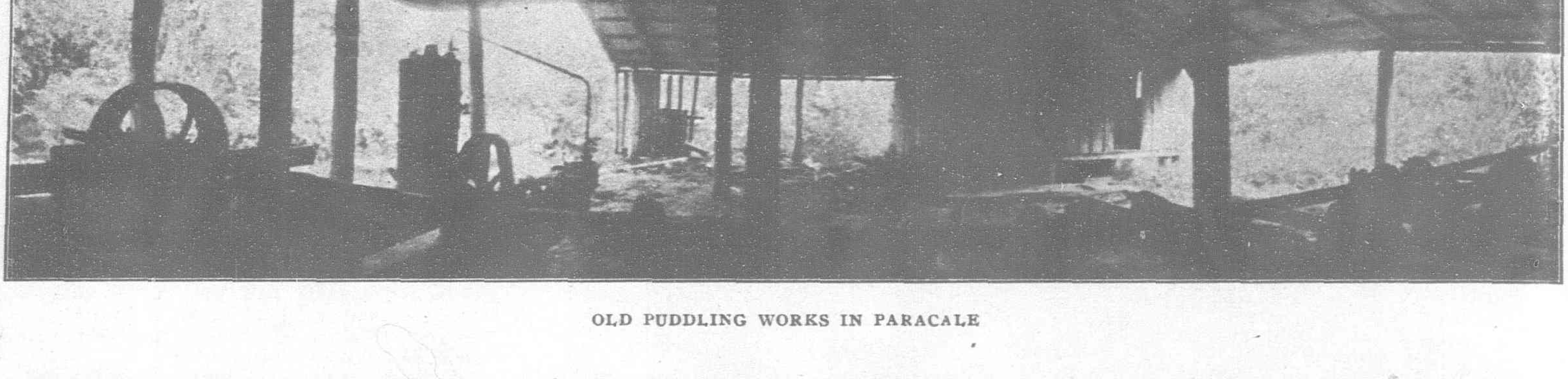
In considering the employment of Ferro-Silicon as heat producer, preference must be given to the high-grade Ferro-Silicon. The quicker the development of heat, the better will be the results. With high-grade Ferro-Silicon there are much greater chances of arriving at satisfactory results, than with the low-grade, On account of the greater solubility of the former in molten iron or in the steel bath, without taking into consideration the fact that less heat will be consumed.

The cost of freight, customs duties, carting and storing in the works will be reduced in proportion to the higher percentage of Ferro-Silicon and if at present prices the unit of Silicon in the high-grade Ferro-Silicon is dearer than in the low-grade, the cost of the unit of Silicon in the finished product will be smaller, taking into consideration all the above mentioned advantages.

GOLD OUTPUTS

Philippine Islands, September

Paracale Gold Dredging Co., 550 ounces; Benguet Consolidated 225 ounces; 321 pounds Cyanide at $18.



OLD PUDDLING WORKS IN PARACALE

WHAT THE NAME "ALBANY" MEANS

Forty years ago Adam Cook established the Albany Lubricating Compound and Cup Company in the City of Albany, N. Y., manufacturing "Albany Grease" and specialties in oils and lubricating devices, and now for seventeen years the entire manufacture of these world wide products have been solely made by Adam Cook's Sons of New York, the firm being composed of the sons of Adam Cook, the originator of "Albany Grease."

The name "Albany"—on lubricants—means that the article is above the common, and that the highest skill known has been employed in the making. It means also that years of experience have served to perfect it.

Adam Cook's Sons now occupy two large buildings located at 313 West St. and 520 Washington St., New York, having increased its output and capacity tremendously since the founder started business in the Albany hole-in-the-wall, at that time supplying a local trade only, while the demand to-day for "Albany" specialties is world wide.

The "Albany" products are pure and adapted to all kinds of machinery in all climates, and are always correctly branded. The trademark also the word "Albany" insures this, and these are registered in all countries of the world. Every engineer associates them with the first lubricating grease ever put upon the market, and it still remains to him the first in every respect,—in lubricating qualities, in economy and cleanliness, in its certainty to keep an engineer out of hot box troubles and all along the line in its lasting qualities.

Adam Cook's Sons, who are the only makers of "Albany Grease," attribute the magnitude of their business to the great care that has continually been given the manufacture of their product and in a great measure also to persistent advertising.

"Albany Grease" can now be had from responsible engine and mill supply houses, hardware, oil and auto supply dealers in every country on the globe. Years of experience have been necessary to perfect this advantage.

TENDERS INVITED

Tientsin-Pukow Railway.—Southern Section.—Nanking.—Tenders are invited for the supply of sleepers and crossing timbers, as per the list given below. For delivery from January to March 1908.

A good quantity of sleeper is required, which can be guaranteed to last well in a damp climate. In the case of specially heavy wood it may be arranged to reduce the thickness of the sleeper from six inches to five inches. Tenders might therefore be submitted for both dimensions.

Delivery to be on the Railway wharf at Pukow, free of all charges. Customs duty will be arranged by the Railway.

Tenders should be addressed to the Managing Director, Tientsin-Pukow Railway, Southern Section, Nanking, and be marked on the outside "TENDER FOR SLEEPERS." They should reach the Director not later than the last day of October 1908, and will be opened at noon on the following day, 1st November.

The Director does not bind himself to accept the lowest or any tender.

INDENT No. 16

100,000	Wooden sleepers,		8'×9"×6"
600	Crossing timbers each		9'×9"×6"
330	"	"	10'×9"×6"
300	"	"	11'×9"×6"
240	"	"	12'×9"×6"
240	"	"	13'×9"×6"
120	"	"	14'×9"×6"
120	"	"	17'×9"×6"

Cie Francaise de Tramways et Eclairage Electriques de Shanghai—4 Quai de Yang King Pang.—The French Tramways and Electric Lighting Company begs to inform the public that in consequence of the completion of its new Central Station which produces all necessary current for the Tramways and Electric Light Service, it is able to offer for sale at the end of October, 1908, the following material:—

1.—Four boilers each of 70 hp. net, with tubing, safety appliances, steam valves, auxiliary pumps, etc. Three of these boilers are of the Thomas Laurens system with fixed furnace. The fourth is a multitubular one made by Messrs. Farnham, Boyd & Co.

2.—Four single-cylinder Corliss engines of 70 h. p. each. These engines are in very good condition and capable of excellent work.

3.—All tubing, joints and valves for boilers, engines and condensers.

4.—Eight multiple-gear dynamos.

The dynamos are coupled two by two, the groups being mounted in parallel lines, and develop current to the extent of 220 volts (at the end farthest from the canalization) for triple wire distribution, the voltage thus amounting to 110 volts on each.

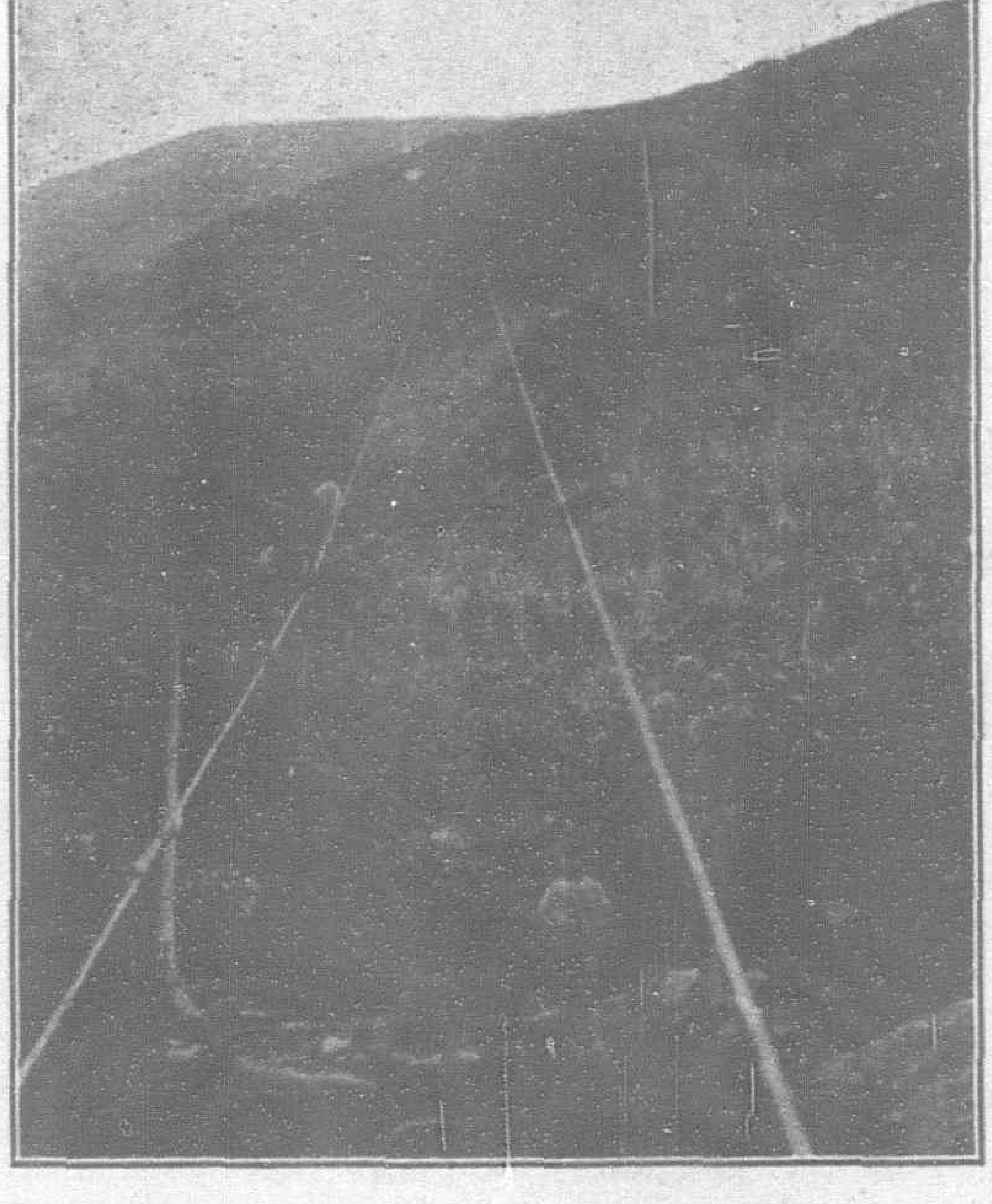
The groups of dynamos can thus be employed at will for a service either of 110 volts or of 200 volts. The dynamos are driven by belts. They have been recently repaired, those of group No. 1 have been lately replaced and the whole collection is in good condition.

5.—A board of distributing and measuring apparatus: watt-metre indicator, ampere-metre register, volt-metres, registers, rheostats, etc.

6.—A series of spare fittings for the engines, boilers and dynamos.

Persons who wish to examine the apparatus while it is actually in use should address themselves to the General Manager who will be pleased to show them the works.

General Manager,
M. Coursier.



BUA MINING COMPANY'S CABLE CONVEYANCE LINE

THE WHANGPOO CONSERVANCY

The following is the report of the progress of the work on the Whangpoo Conservancy submitted by Directors H. E. Hobson and Ts'ai Nai Huang of the Whangpoo Conservancy Board for the quarter ended June 30th, 1908:

SIR,—In accordance with the stipulations of article 4 of the agreement signed in Peking on the 27th September, 1905, regarding the establishment of a Board of Conservancy for the Whangpoo river and with reference to our report of the 14th May and previous ones to the Consular Body on this subject, we have now the honor to present the following statement regarding Conservancy Work during April, May and June 1908:—

2.—STAFF APPOINTMENT, CHANGES, ETC. (a) *Foreign Staff.*—Messrs. A. Nederlof (Dutch), F. E. Gram and T. O'Hare (British) were appointed during the quarter; Messrs. Kalbein and Davis left the Board's employ.

(b) *Native Staff.*—No important changes,

3.—PLANT.—A new launch, the "Limin." was added to our fleet at a cost of Sh. Tls. 9,300, built by the New Engineering Shipbuilding Works, Limited.

4.—*HOUSES.*—The final payment was made for the house in the French Mail compound at Woosung.

5.—The following details are from Mr. de Rijke's quarterly report to the Conservancy Board:

During the quarter the principal seat of operations in stream training—in connection with the powerful night and day dredging now progressing—has been at the upper end of Gough Island. The Junk Channel Bank opposite there, now overgrown with rushes, had increased in height to nearly 7 feet above low tide, with the result that the whole stream of the river at Kejow tended more than ever before to flow into the ship channel. To reverse this a great deal has already been done, especially by training work as stated in the report, but it will be necessary during next quarter to proceed with the works with undiminished energy. A way for the stream (not yet for shipping) having now been made along the whole length of Junk Channel, I hope soon to have all three bucket dredges at work on the bank at the head of the channel.

WOOSUNG OUTER BAR TRAINING WORKS, CONTRACT I.—Actual work done during the quarter:

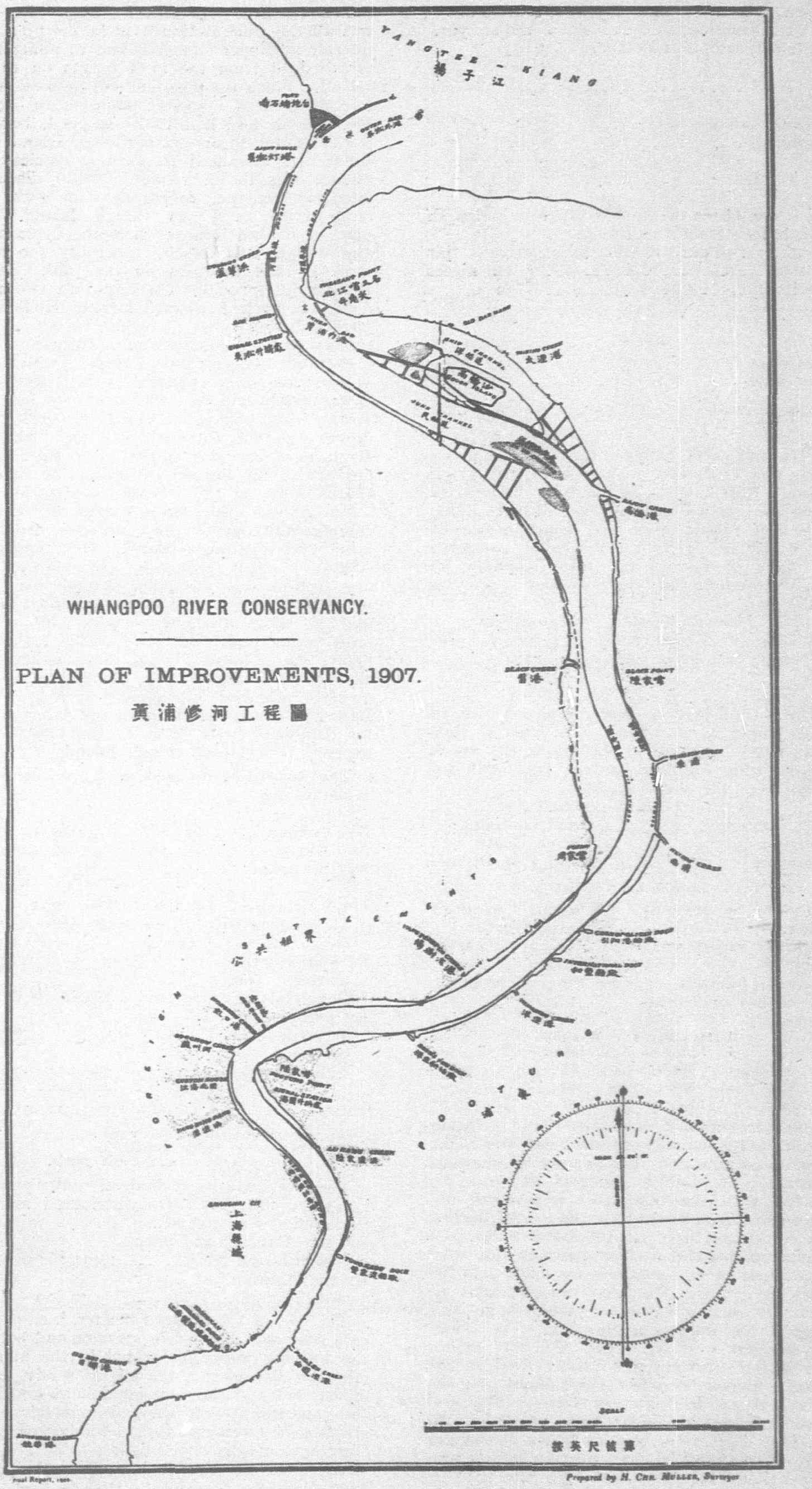
	sq. yd.
Jetty—Bottom layer of zink-stuks of G construction	10,800
Jetty—Bottom layer of zink-stuks B contruction	1,440
Second layer C	11,190
Second layer B	13,639
This quarter	87,069
Previously	13,190
Total to date	46,259

This completes the bottom layer over its whole length 4758 feet, or 38 feet beyond the gabbioni work ending in the original design. The second layer is complete over a length of 3210 feet, the end of the second section.

TRAINING WORK AT PRINCE'S WHARF—

Third layer of zink-stuks of A construction	5,395	sq. yds.
Previously laid	9,994	"
Total	15,389	"

which completed the zink-works in this training work over its whole length of 680 feet. Piling: 131 50-feet piles were driven through the basework of zink-stuks in three rows on south side over a length of about 180 feet. The cribwork at Prince's Wharf connecting the training work with the shore has been raised to about its full height as designed but its upper part by a temporary construction only, at the contractor's expense, as a landing stage for stone transport.



SOLIDIFYING ZINK-STUCKS.—Sandy soil dredged from Junk Channel (Dredging Contract) deposited on the above mentioned zink-

stuk	13,164	cub. yds.
Previously	13,779	"
Total	26,943	"

Much greater quantities will soon follow.

SEA DYKE.—Second layer of zink-stuks

of A construction	189	sq. yds.
Previously laid, bottom layer	5,193	"
Total	5,382	"
Fascine mattress work	1,101	"
Previously	1,692	"
Total	2,793	"

which completes the first layer over a length of 930 feet from the shore.

FILLING:—Piles 18-feet long driven this

quarter	499	pieces
Previously	300	"
Total	799	"
Piles 15-feet	243	"
Previously	258	"
Total	501	"

Clay and earth filling in and behind the sea dyke was continued with a small railway as before. Rubble stone on sea dyke: besides the stone used as ballast for the zinkstuks, other masses of rubble stone are being thrown on the sea dyke, firstly as top ballast to settle the body of fascine and clay, secondly for roughly pitching the dyke's sea slope according to the plan.

Work Harbor Bunding: Bottom layer of

zink-stuks of A construction	2089	sq. yds.
Previously laid	1212	"
Total	3301	"

The bottom layer is now completed over its whole length of 1593 feet. This layer of zinkstuks partly exposed to the air at the lowest tide is being solidified and covered with soil taken from the shoal inside.

PLANT IN USE BY CONTRACTOR

- 2 Big Pontoons
- 1 Tug boat
- 1 Sampan
- 2 Small Pontoons
- 4 Anchor Boats
- 2 Hand Pile Drivers.

LABOR EMPLOYED

- 2 Dutch Superintendents
- 18 Dutch expert sinkers
- 10 coolies foremen
- 310 coolies and boatmen
- 2 Ningpo Foremen Fascine Workers
- 40 Ningpo Fascine Workers
- 10 Ningpo carpenters

	Days wages Natives.	Workable Days.
April	6970	21
May	9889	22
June	11370	22

DREDGING WORK CONTRACT ROLL.—Dredging in Junk Channel continued day and night, interrupted now and then mainly by increased currents. The bucket dredgers at work are moored with the bow river downward, and when ebb tides run strongly the loaded buckets run empty as they rise to above water. On account of this the machines have to stop work for an hour or so, sometimes for more than two hours at a time. That such interruptions are gradually increasing, as foretold, is in itself a sign of the progress of the work. The following dredgers were at work: "Colonia" at the end of last quarter; this bucket dredger had made a furrow 6000 feet long, about 300 feet wide and 15 deep at low water. This was continued to Old Upper Base where on the 3rd June deep water was reached a distance of 10950 feet from the first starting point near Upper Gough Island. On the 4th June the "Colonia" was shifted to a point opposite Kajow Creek and from there downward started dredging a channel of the same width and depth. By the end of this quarter she had advanced about 2100 feet, to a point where Junk Channel Bank is overgrown and has a height of over 6 feet above low water. The wall of soil in front is thus at present more than 21 feet high so the advance during the next few weeks cannot be great. The "Rhenania" during the quarter advanced 2050 feet and is now connecting up the Colonial Channel with the old Channel on the left side above Limit Beacon. There are ten or eleven feet of water on the down river spit still to be dredged, so the end will soon be reached. The suction dredger "Cycloop" was all the time stationed as in the preceding quarter at Upper Gough Island to pump matter dredged from the mud barges on to the Island. When the pipe line had been extended to a distance of 1350 feet pumping up became too difficult and had to be stopped, but the works at the upper end of Gough Island were sufficiently advanced to form a spacious enclosure (for the new pipe line to discharge into) between the two parallel dam works and cross dams at Upper Gough Island. This place of deposit is near where the Cycloop lies and within easy reach, especially for night work of the dredgers on the Junk Channel Bank right opposite. On May 12th two other dredgers reached Shanghai from Holland, a bucket dredger, the "Shanghai," in all respects similar to the "Colonia" and "Rhenania" and a suction dredger, the "Canton," which has at least the same capacity as the "Cycloop." Both vessels had to dock after the long sea voyage. The "Shanghai," ready for work, came down to Junk Channel on June 4th and commenced dredging on the right side nearly opposite Limit Beacon, widening the dredged channel so as to obtain access for the "Canton" and the mud barges to the pipe staging built out by the contractor from the lower end of Gough Island. This temporary staging is about 1100 feet long and extends 400 feet outside the right normal line. The water here being too shallow for loaded barges and tug boats, dredging could be done at first only during high tide. It was the 24th June before the "Canton" could take up her position at the staging and pump the matter, hitherto dumped elsewhere, on the Gough Island. Clay works surrounding large spaces for depositing were built at the Contractor's expense near Lower Gough Island.

The quantities dredged so far as measured in barges are:

	(1)	(2)	(3)
By "Colonia"	601,873	621,095	1,222,967
By "Rhenania"	654,387	548,107	1,202,494
By "Shanghai"	97,639	——	97,639
Total	1,353,898	1,169,202	2,523,100

Those quantities of silt were deposited

	(1)	(2)	(3)
By pumping the matter on Gough Island	774,168	769,803	1,543,971
By pumping in mass on and between the training works	579,730	399,399	979,129
Total	1,353,898	1,169,202	2,523,100

(1) In this quarter, cubic yards.
(2) Previously, cubic yards.
(3) Up to the 30th June, cubic yards.

The total quantity of dredged matter pumped, 1,543,971 cub. yds., was distributed amongst the dredgers as follows:

By the "Canton" at Upper Gough Island	1,494,162	cub. yds.
By the "Canton" at Lower Gough Island	49,809	"

The rest of the dredged matter, i. e., 979,129 cub. yds., was dumped in mass on and between the training works (as stated in the monthly reports). Considering the sticky sandy nature of the soil and the occasional hard knocks of the buckets against invisible obstacles—telegraph cables amongst them—submerged in the river bottom, the above figures show the great strength of the dredging machinery.

The depth of water in the dredged route was at the end of June nowhere less than 12 feet at low water over a width of more than 400 feet, except at Upper Gough Island to the right of the Junk Channel Bank where the 12-foot channel in the narrowest place was only 330 feet wide with, however, the much greater depth of over 30 feet in the middle. The Junk Channel Bank is already decreasing by "scour" as well as by dredging especially during ebb tides, though the flood tides passing over the lower end also affect it. The scour of the bank by ebb-currents is perceptibly increasing as the training work above Upper Gough Island progresses. The matter scoured from the great bank, as well as the quantities of soil falling away from the sides of the newly dredged channel, flows at once into deeper water and is transported by the current along the dredged channel where part of it, of course, settles as the currents slacken. Thus, under present conditions, we have in Junk Channel a fairly increasing scour (see current observations), and on the other hand extra settling of matter along the dredged channel, which may temporarily continue until the matter, set in motion on the shoals, can reach the concave below Limit Beacon which is being extended by the Outer Bar works down to the Yangtse. New soundings taken at the end of June show that the scour already has the upper hand though not as yet to any great degree. Much must still be done before regular deepening by nature only can be expected.

CURRENT MEASURED VELOCITY IN FEET PER SECOND. (1st July 1908, 28th June 1908 and 10th April 1907.)

	Junk Chan.	*Ship Chan.*	*Junk Chan.*	*Junk Chan.*	*Ship Chan.*	*Ship Chan.*
6 a. m	2.98	—	4.02	3.33	8.00	4.40
7 a. m	4.08	—	3.68	3.03	1.00	4.40
8 a. m	5.00	3.73	1.05	0.93	—	1.50
9 a. m	5.20	2.63	2.60	1.61	1.80	1.50
10 a. m	3.47	3.45	2.23	2.50	2.50	3.80
11 a. m	3.61	3.00	2.00	1.30	2.70	2.40
12 noon	1.82	0.78	0.78	0.45	1.80	1.60
1 p. m	3.48	3.23	—	0.47	1.60	—
2 p. m	2.65	2.13	2.17	1.60	1.40	1.60
3 p. m	1.67	0.96	2.73	2.50	1.10	2.70
4 p. m	—	—	3.32	2.60	1.50	4.40
5 p. m	1.95	1.40	3.60	3.23	1.90	4.70
9 p. m	2.40	2.50	4.12	—	1.70	4.90

The 1st July, 1908, was a spring tide, 26th June, 1908, neap tide, 10th April, 1907, a neap tide. The place of measuring velocities was on each occasion in both channels nearly opposite middle Gough Station.

PREPARATIVE WORKS.—Clay walls have been built at contractor's expense around the spaces of low land at the lower end of Gough Island to be filled with dredged matter pumped up by the "Canton." The old opium hulk "Wellington" was purchased by the Contractors and moored on the Ship Channel side of Upper Gough Island to be used as quarters by the men, and as a storehulk.

PLANT IN USE

- 2 Bucket Dredgers
- 10 Mud Barges
- 4 Tug Boats
- 2 Suction Dredgers
- 1 Coal Barge
- 1 Motor Despatch Boat

LABOR

2 Foreign Superintendents	
18 Foreigners and	48 Chinese on Bucket Dredgers
14 Foreigners and	24 Chinese on Suction Dredgers
4 Foreigners and	36 Chinese on Tug Boats
	60 Chinese on Mud Barges
	5 Chinese on Coal Barge
38 Foreigners	173 Chinese.

also a varying number of Chinese as earth workers, pipe layers and carpenters.

WORKING DAYS

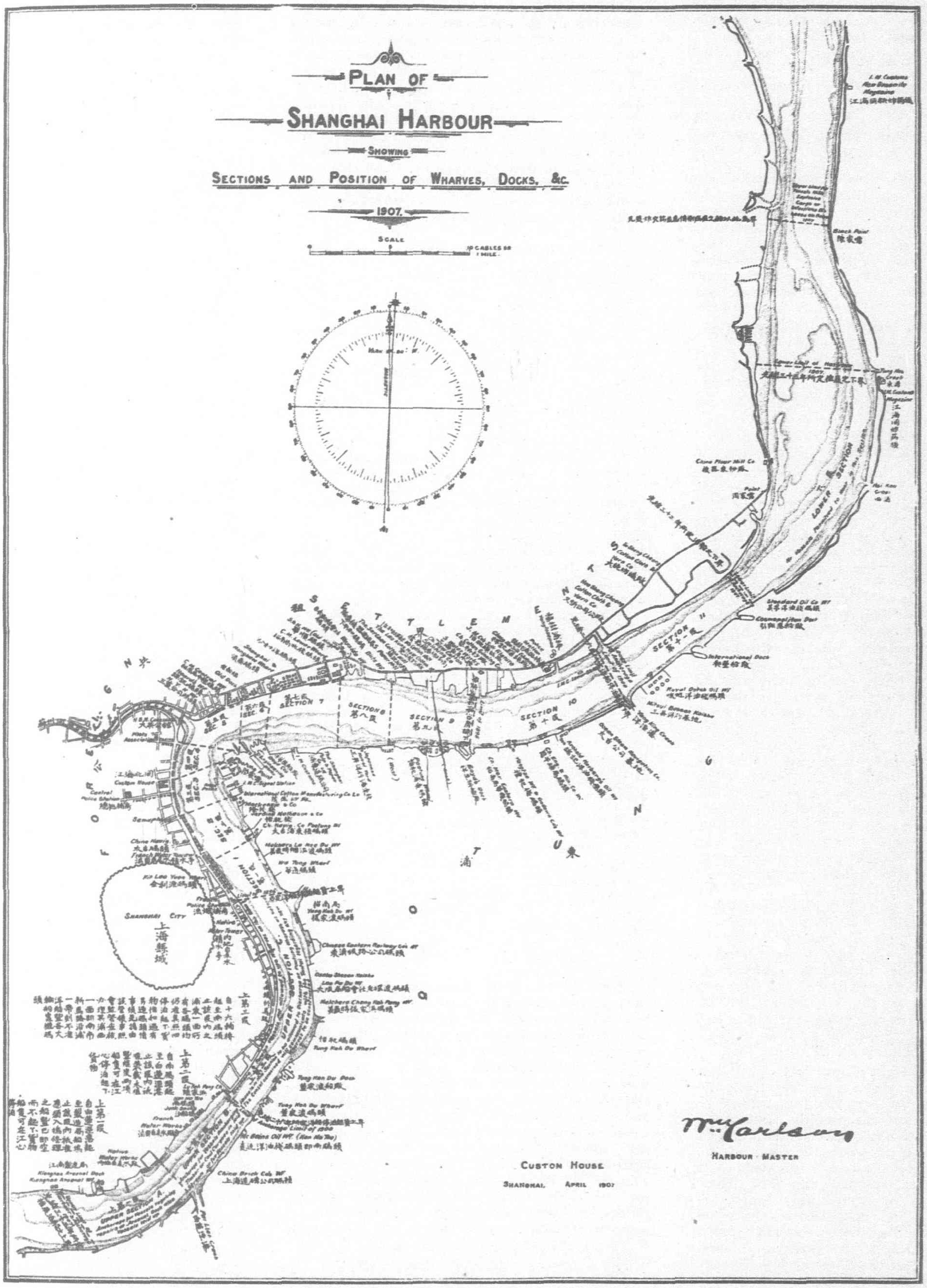
April 25
May 24½. Sundays and Holidays 17½
June 24

Total 73½. Bad weather days Nil.

In use by Conservancy Office for dredging control: 1 pinnace and 2 new boats.

WORKS UNDER OUR OWN ADMINISTRATION.—(a) Gabbioni dumping:

	Gabbioni.
In double crib-work at Salient (crib E)	20



In triple crib work at Dyke end (crib C)	13
In double crib-work at Storm (crib A and B)	2,958
In triple crib-work at Kajow (crib A and C)	760
In training work at Upper Gough	6,165
Total	9,925
Previously	19,170
Total	29,095

(b) SINK WORK

Zinkstuks sunk this quarter	s. yds.	Total. sq. yds.
In parallel dam Lower Gough	4,563	49,427
In elbow dam Lower Gough	—	6,624
In cribs Lower Gough (crib B)	500	2,746
In double crib work Limit Beacon (parallel)	2,260	4,820
In double crib work Salient Beacon	6,459	10,939
In training work Upper Gough	47,583	115,209
In crib work Pheasant Point	630	630
In crib work Dyke End	—	3,623
In crib work Kajow	—	3,753
In shore defence, Barmark	—	2,114
Total	61,994	199,882

(b) Laag work: (Layers of Brushwood above low water fixed by fences).

	sq. yds.	sq. yds.
Parallel dam Lower Gough	14,677	19,682
Elbow dam Lower Gough		6,420
Cribs Lower Gough (Crib I C)		200

Training work Upper Gough (in normal line)	5,269	5,629
Training work Upper Gough (mark pile 9)	180	180
Total	20,126	32,111

PROGRESS IN TRAINING AND RESTRAINING THE STREAM

(a) Parallel dam below Gough Island:

This long dam has been extended with a bottom layer of Zinkstuks to a length of 4607 feet from the shore of this island. Raised to above low water over a length of 3043 feet, and higher with laag-work clay and stone to 2893 feet from the island. The top of the laagwork inclines from 10 to 7.5 feet above low water.

(b) Elbow dam was raised to about 8 feet above low water over a length of 630 feet.

(c) Crib-work Pheasant Point from the Pootung shore below the point, this work has just commenced with one Zinkstuk in the bottom layer.

(d) Training work Upper Gough Island:

In order to deflect still more of the ebbstream into Junk Channel this great work has been proceeding with the utmost speed. The parallel work on Junk Channel side itself a very formidable dyke, formed under water of strong Zinkstuks only, is being extended farther than at first intended for two reasons, firstly, because sinkwork right across the stream of Ship Channel as indicated in the plan as well as in the triple cribwork just below Kajow Creek has been found too dangerous for the sinkers and their native helpers as long as shipping is passing there; secondly, because the longer the dam the more it overlaps the upper end of the Junk Channel Bank just opposite and increases the deflection of the stream in the desired direction. At the end of June was made (see annexed sketch) a bottom layer of zinkstuks 40 yards broad, along the normal line extended to 850 feet past mark pile No. 1, i.e. 2930 feet distant from Gough Island. The depth of water there was about 27 feet at low water: the second layer of zinkstuks, 28 yards broad, has also been made to 212 feet from mark pile No. 1. On these successive layers from 27 to 10 yards in breadth, to above low water (always forming a slope downwards at the end) to 75 feet from that mark pile. Where the depth of water is 26 or 27 feet above low water the whole cross section consists of 13 layers of zinkstuks together 285 sq. yds. per yard in length in which are used nearly 4000 bundles of brushwood besides masses of rubblestone. Such a construction can withstand the strongest currents ever seen in the Whangpoo, but on account of the stream now rushing over the end of the work like a rapid the sinking of large zinkstuks has to be stopped at spring tides.

Laagwork to a height of four feet above low water was made to about 1400 feet from the island. A rubble wall on the top ballast 11 feet above low water was roughly built up to 440 feet from the island. This wall is intended firstly as top ballast to settle the body of the dyke; secondly to form an enclosure behind it for dredged matter pumped up. The effect of the extension so far is strikingly noticeable from the soundings in Junk Channel along the dyke. At the end of April last there was a depth of water in the middle of the channel between mark piles 1 and 4 of less than 12 feet, by the end of June we found in the same place over a length of about 900 feet a depth of from 16 to 25 feet at low water the increase being obtained by scour alone. The parallel dam of the same work on the ship channel side was built up by dumping gabbioni on a bottom layer of one zinkstuk; for a length of 1700 feet from markpile No. 9 it was raised to about two feet above low water and on this a rubble wall, 11 feet above low water in height, was completed over a length of 600 feet. The cross dam from markpile No. 9 to the Gough Island shore was built and completed in the same way. The cross dams between markpiles 2 and 12 and 4 and 11 were raised to a little above low water. The space of water enclosed by stone walls to above ordinary high tide at first shallowed by dumping matter from the mud barges has since the 29th June been receiving dredged matter pumped into it by the "Cycloop." Nearly all the sinkworkers and most of the gabbioni dumpers being required to push on this important training work, not much could be done with the other cribworks at Kajow, and on the left bank of the river. At "Storm" opposite Kajow, however, 2958 gabbioni were dumped, by which this work reaching about 2400 feet from the left shore was raised to above low water practically stopping the stream on that side.

PLANT IN USE

5 pontoons for gabbioni dumping	3 tugboats
2 steam launches	28 cargoboats, small boats, etc.

Workmen employed: (Chinese).

Boatmen, fascine workers, carpenters, watchmen, foremen and coolies:

In April	322 men or	9670 days' wages.
In May	367 men or	11007 days' wages.
In June	358 men or	10753 days' wages.

MATERIALS

	In stock 1st April	Arrived and acctd. during quarter
Bundles of Brushwood	353,258	1,498,000
Bundles of Stakes	28,324	——
Piculs of Reeds	655	7,968
Bamboo Baskets	845	9,185
Ballast Stone (tons)	6,795	40,359
Poles of different lengths	2,687	——
2 thread native hemp rope, feet	73,500	660,000
27 thread native hemp rope, feet	2,300	12,600
Galvanized iron wire (lbs)	7,030	37,348
Seizing wire (lbs)	5,002	28,180

	Used during quarter	In stock 1st July, 1908
Bundles of Brushwood	1,707,823	143,439
Bundles of Stakes	15,194	13,130
Piculs of Reeds	8,249	374
Bamboo Baskets	9,925	105
Ballast Stone (tons)	40,467	6,687
Poles of different lengths	128	2,559
2 thread native hemp rope, feet	52,000	181,500
27 thread native hemp rope	12,900	2,000
Galvanized iron wire (lbs)	42,917	1,461
Seizing wire (lbs)	33,182	——

CHANGES IN JUNK CHANNEL between the normal line during the last 9½ months up to the 1st July 1908.—The distance between the normal lines at Kajow is 1960 feet, from there downwards the width gradually increases so that at Old Upper Base it is 2130 feet. To ascertain in the most accurate manner possible the alterations effected so far by dredging and training operations the whole field of the Junk Channel between the normal lines was divided into squares of 100 by 100 feet that is 1-2 inch squares on the standard map with a scale of 1:2400. In each square 2 soundings were filled in, one taken from the survey made in the middle of September 1907, the other from soundings made towards the end of last June.

All soundings reduced to low water.

The following was found (see chart):

1st Section, from A crib at "Storm" down to "Upper Gough" covering about 925 squares, which includes the upper or highest part of the Junk Channel Bank, 1,065,000 cub. yards of sand and silt were removed, of which 529,208 cub. yds. were removed by dredging, 535,792 cub. yds. by scour.

2nd Section, from Upper Gough to Salient covering about 720 squares and including the lower or tail end of the Junk Channel Bank: 1,234,000 cub. yds. of matter were removed, 950,709 cub. yds. by dredging, 283,291 cub. yds. by scour.

3rd Section, from Salient to Limit Beacon covering about 840 squares: 460,000 cub. yds. were found removed, whilst 693,702 cub. yds. were dredged showing a negative result, due to silting, of 232,702 cub.yds.

4th Section, from Limit Beacon to Old Upper Base covering about 735 squares. Here the result was a loss in depth amounting to 60,000 cub. yds. of silting, against 290,148 cub. yds. removed by dredging.

Although the results in sections 3 and 4 is on the negative side, the silting here was almost entirely on the shallows, the through depth in the desired direction was much increased and is still increasing.

The total result over the whole area of the four sections (3220 squares of 100 by 100 feet) is:—

	cub. yds.
Total amount of matter removed	2,699,000
Removed by dredging	2,463,767
Removed by scour	235,233

Below Upper Base down the "Signal Station" 109,000 cub. yds. were removed by scour without any dredging owing to the concavity of the Woosung which commences at Old Upper Base and prevents matter set in motion higher up from settling there. It must also be remembered that when dredging commenced last December at the upper end of the Junk Channel Bank silting was still rapidly proceeding in Junk Channel while Ship Channel was increasing in depth. From Salient downward dredging with one machine only began at the end of February, so we have to allow here for silting from September 1907—the date of the first set of soundings compared—to March 1908 or nearly half a year. Dredging itself also generally causes, at least temporarily, more or less silting lower down as for instance the Junk Channel Bank which is overgrown and nearly 7 feet below water, which means, as we dredge to 15 feet below low water, a steep bank on one side of 22 feet in height. With a strong ebb tide rushing against this the sides naturally fall away, large lumps of soil plunging into the stream to dissolve and be deposited lower down. The same thing on a smaller scale is seen lower down when dredging the shallows below Junk Channel Bank, but on the whole I may repeat what I said in the last Quarterly Report "in Junk Channel scour already has the upper hand."

SURVEY.—The following remarks are taken from the survey report for the three months April, May and June; the mouth of the river was resounded from Pheasant Point to Fort Jetty over the shoal to deep water, sounding lines run 300′ apart. The coast line from 2 stone along the Yangtse was measured for about 4000′ and sounding lines run for every 300′ out to deep water. A new survey was made of the Junk Channel from Storm to Old Upper Base in April, sounding lines run 300′ apart. Shallow soundings by actual measurement were taken, 7 lines between the Conservancy house and signal station at Woosung, 5 lines twice at Upper Gough Island to see if the mud bank was cutting away, 10 lines across the ground at Lower and 19 lines at Upper Gough Island; 16 sounding lines were run between the normal lines from Dyke End to Storm, at the end of May, to locate a new place for the Dredger to start from and the direction in which to dredge.

The positions of the red and black light in Ships Channel and of some piles at Upper and Lower Gough Island were fixed, also of the Spit Buoy at Woosung Forts.

New tide gauges were placed in Junk Channel and at Prince's Pier, and their zeros fixed by levelling from stations ashore. A new dyke for retaining mud at Upper Gough Island was measured. Ship Channel was resounded in June from Kajow Creek to Pheasant Point and 7 sounding lines parallel with the Bar line run twice over the Inner Bar to see if the depth was changing. Junk Channel was also resounded, and sounding lines run 300′ apart. All those surveys were plotted and tracings sent to the Engineering Department. Most of the shallow soundings were plotted on square paper to show the cross sections.

6.—EXPENDITURE.—A statement showing receipts and expenditure for the Quarter under review is enclosed, supported by the necessary vouchers.

We have the honoor to be,
Sir,
Your obedient servants,
(Sd.) Ts'ai Nai Huang.
(Sd.) H. E. Hobson.
Directors of the
Whangpoo Conservancy Board.

D. Siffert, Esq.,
Consul General for Belgium
and Doyen of the Consular Body.

Statement of receipts and expenditure during June quarter, 1908.

	Hk. Tls.	Hk. Tls.
Receipts		
Balance from March Quarter, 1908		69,472.01
A Superintendent; on account Grant	500,000.00	
B Unclassed; sundry receipts	699.24	
C Gain by Exchange	1,312.96	
Total net Receipts, June Quarter	502,012.20	502,012.20
Advances repaid		376.20
Total		571,860.41
Expenditure.		
1—Salaries	34,038.93	
2—Transport	158.11	
3—Rent	2,088.80	
4—Plant: Cost and Maintenance	11,287.85	
5—Houses, Furniture, &c.	727.71	
6—Ordinary: stores, &c. Miscellaneous	787.55	
7—Conservancy Works	457,840.75	
8—Loss by Exchange	----------	
9—Special Payments	37.07	
Total next Expenditure, June Quarter	506,966.86	506,966.86
Advances, lent		376.20
		507,343.06
Balance carried forward		64,517.35
Total		571,860.41

Prepared by:
A. G. Carruthers,
H. E. Hobson,
Commissioner.

*THE PAST AND THE PRESENT OF THE DAIYA MINE IN CHINA

Originally this mine was worked by Germans, but through the efforts of Dr. Nishizawa, a mining expert, the entire business was practically transferred to the hands of the Japanese. We are highly delighted to note such distinguished ability as that of Dr. Nishizawa in furthering the peaceful interests of Japan. The appearance of men like Dr. Nishizawa for our country is a matter of great importance. Before going further let us dwell upon the service rendered by Dr. Nishizawa. In 1890, Cho-shi-tan, the viceroy of Ho-ming, planned to establish the largest iron foundry in the Orient, and instructed his men to make careful investigations. The viceroy was induced to make an investigation of this kind by reading a Chinese history where the "sword of Daiya" is mentioned, and after a great deal of study came to the conclusion that there must be some advantages in the province of Daiya where mines may be properly worked. He employed a German expert, through whose keen observation a large iron mine was discovered, which has ever since been known as the Daiya mine. Instead of informing Cho-shi-tan of this discovery, the German expert immediately cabled to the German Government which lost no time in negotiating with the Peking Government for the mining rights and the construction of railways, but the strong opposition of the viceroy thwarted the object of the Germans, but the latter exacted a promise that they should make a contract for the supply of all the machinery and experts wanted. This paved the way for the present influence of Germans in Chinese mines. The iron ore debris accumulating around the historic ruin of the Daiya iron gate might with advantage be employed for various purposes. When the Japanese Government made a contract with the Chinese to make a purchase of this mine, the Germans offered to buy from China this iron dust at the rate of 6 dollars 50 cents per ton, hoping thus to prevent to the formation of this contract and obstruct the work of the Japanese, but through the strong opposition of Dr. Nishizawa they were foiled in their attempts. Arrangements are being made to plant trees in the neighborhood of the Daiya mine so that before long a thriving prospect for vegetation will be discovered. The fact that the mine is full of promise can not be denied.

The success in leasing the Daiya Mine naturally must be attributed to efforts of Dr. Nishizawa, but the ill feelings entertained by the Chinese authorities towards the selfishness of the Germans must have greatly assisted the speedy execution of the event. The Daiya railway is the only means of communication that is used for the mine. This railway was projected by Germans extending for the period of 1890, 1891, and 1892. Sleepers, railways, repairing tools and other materials have all been imported from Germany. The Daiya Mining Bureau was established at this time under the presidency of the Chinese, but Germans occupy important posts in connection with this Bureau while the circuitous routes of railway lines show that the mere lengthening of the lines was a primary object of such railway construction. Had the Japanese been engaged in the construction of the line from the beginning, certainly a wasteful system would not have been adopted. It appears that the ambition of the Germans is clearly understood. The Kan-yo iron foundry was projected in 1891 in connection with the Daiya Mine, and it was to have been built by the Belgian syndicate, and was to have been completely controlled by Belgians, but in 1894, loans had to be made from the German Bank; thus German experts took the place of the Belgians, but the Germans were not amenable to directions of Cheng-shi-tung so that finally the Chinese viceroy had to refund the money in the aforesaid Bank and at the same time he employed Belgian experts. Thus friction arose between the experts of the two countries; meanwhile it appears Dr. Nishizawa took the advantage of the situation in obtaining contracts in connection with the Daiya Mine.

In 1895, because of the various financial difficulties arising in connection with the Japan-China war, Chang-shi-tung decided to sell the iron foundry to a certain foreigner, but the Government did not permit it on the ground that there would be a great need for such iron foundry. Under the circumstances, the minister of commerce and railways and the governor of the Chinese telegraphic Bureau who had a great influence in every way brought this iron foundry under his control. In 1897 when peace was restored with China, Ito and Inoue, the two elder statesmen, entered into contract with the Chinese Government in connection with the Daiya mine so that on April 7th 1899, the so-called 5 years' contract was drawn up and Dr. Nishizawa was charged to see to the execution of this contract. At this juncture, the boxers trouble in Peking stirred up the whole country, coolies, filled with anti-foreign spirit, disobeyed the orders of foreigners and the German experts had to flee to Shanghai. Nothing daunted, Dr. Nishizawa devoted himself to the execution of his project, and at last succeeded on June 30th 1900 in conveying 1600 tons of iron on the Akuura maru from the Daiya Mine, leaving the harbor on July 4th. This accounts for the importation of iron ores to our country. Dr. Nishizawa established an office in Daiya and in spite of the Germans and a certain section of Chinese concluded the Daiya treaty in June 1904, after repeated conferences which enabled him to work the mine. This was only a fortnight before the outbreak of the war and thus Japan was well equipped with iron supplies during the time of the war in making rails, shells and other warlike weapons. It was with the material from the Daiya mine that Japan was able to build large warships by her own resources. Thus Russia in June 1904 declares that China was violating the neutrality by exporting iron from the Daiya mine to Japan.

*NEWLY OPENED MI-IKE HARBOR

On April 7th under the Imperial ordinance 75, the opening of the Mi-ike harbor was announced, the Mi-ike county, in the Southwestern part of Chikugo province and forms a part of the Ariake bay, which is situated at a point 40 miles north east from Dezu-mina which forms a chief port of export for Mi-ike coal. The construction of the harbor was completed by the Mitsui mining department expending the sum of 3,000,000 *yen.* At Mi-ike port Ariake bay is over shallow and sandy so that several miles must be traversed before deep waters are reached. Thus the harbor consists of three sections—the internal, external harbors with a passage between for vessels.

The Internal Harbor.—The internal harbor is intended for the conveyance of coal and goods and the area of the water surface is 28,000 *tsubo*, and the depth is 18 feet at ebbtide. The pier has 162 feet frontage which provides ample space for docking larger vessels. The inside of the dock is provided with water gates to keep the depth of water not less than 20 feet, which in full tide reaches 38 feet.

The banks along the eastern side of the dock extend some 1,380 feet and 3 vessels of ten thousand tons each can be anchored at the same time. In the future, it may not be difficult to find space for the anchoring of 9 vessels. The height of the breakwater is 11 feet 6 inches faced with granite, and there are provided scores of iron stanchions and three cranes.

The width of the waterway is 66 feet and the depth 18 feet while copper bound iron gates connect the waterway extending 415 *ken* (a *ken* is equal to 6 feet). The outside of the harbor is delimited by stone walls for a distance of 600 feet on the eastern side, and two wings stretching south and north giving it the shape of a cylinder. The area is 150,000 *tsubo*, but the work of dredging this space requires a considerable time and money. For the time being, a roadway 150 feet wide will be built in the centre of the harbor, for the distance of 1,000 *ken* (a *ken* is 6 feet) and at a depth of 18 feet during ebbtide with the banks built to keep off the breakers and sands, the distance between the banks being 450 feet.

It appears as though Mi-ike harbor is owned by the Mitsui family, having been built at their expense, but it will at the same time contribute a great deal towards the public convenience.

Some of the benefits arising from the building of this harbor are as follows:

1. The people in the neighboring districts will derive considerable benefits either from the use of their labor or from the manipulation of capital.
2. The city will grow up around the harbor.
3. The cheap freights will lower the price of commodities, affording a considerable help to the people.
4. The commercial and industrial prosperity arising from the building of the harbor will lead to their national wellbeing. They greatly affect the condition of Kotsu-harbor which will lose its business because the whole work will be taken away by the new arrangement. The following figures give the amount of business done in this connection.

Years	Exports	Imports	Total.
	yen	*yen*	*yen*
1903	4,743,061	409,968	5,153,029
1904	4,878,136	809,147	5,687,283
1905	4,786,040	247,364	5,033,404
1906	4,356,322	146,021	4,502,343
1907	4,908,868	307,992	5,216,860

Thus it will be seen that the Ko-tsu harbor has nothing to do with importing, its chief business being that of export. During 1906, coal took up 97 per cent of the total export from the harbor. Thus it will be seen that the fate of the Mi-ike harbor will depend upon the output of coal from the Mi-ike mine. In fact this harbor may be superior in every way to that of Nagasaki or Moji when fully developed.

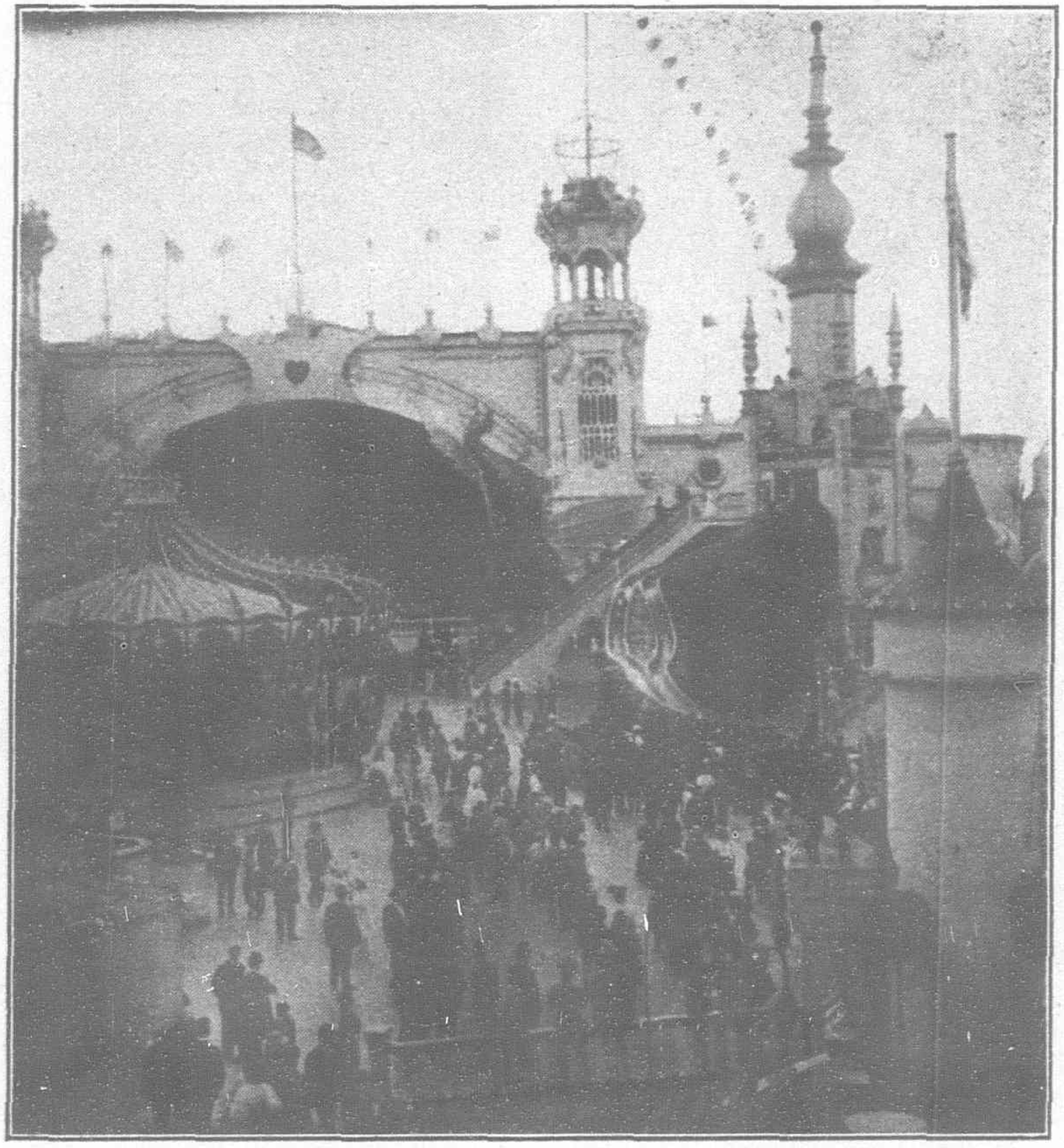
---

*Japan Financial and Economic Monthly.

* Financial and Economic Monthly.

MANILA'S CONEY ISLAND

The installation of a modern amusement park in Manila, where all classes may have recreation, is the object of the Palomar Amusement Park Company, capitalized in Manila, at ₱300,000, the incorporators of which are Messrs. Mauro Prieto, Luis Hidalgo, R. C. Baldwin, M. A. Clarke, Leopoldo Kahn and Carl Hess, all businessmen of Manila, and R. J. Louis of New York City. Mr. Louis has been identified with the growth of the amusement features at the famous Coney Island and will be managing director. The plans have been practically concluded for the initial work. Mr. Louis is expected shortly and Mr. Art. Poole, an expert electrical engineer, is in charge of the preliminary work until the arrival of Mr. Louis.

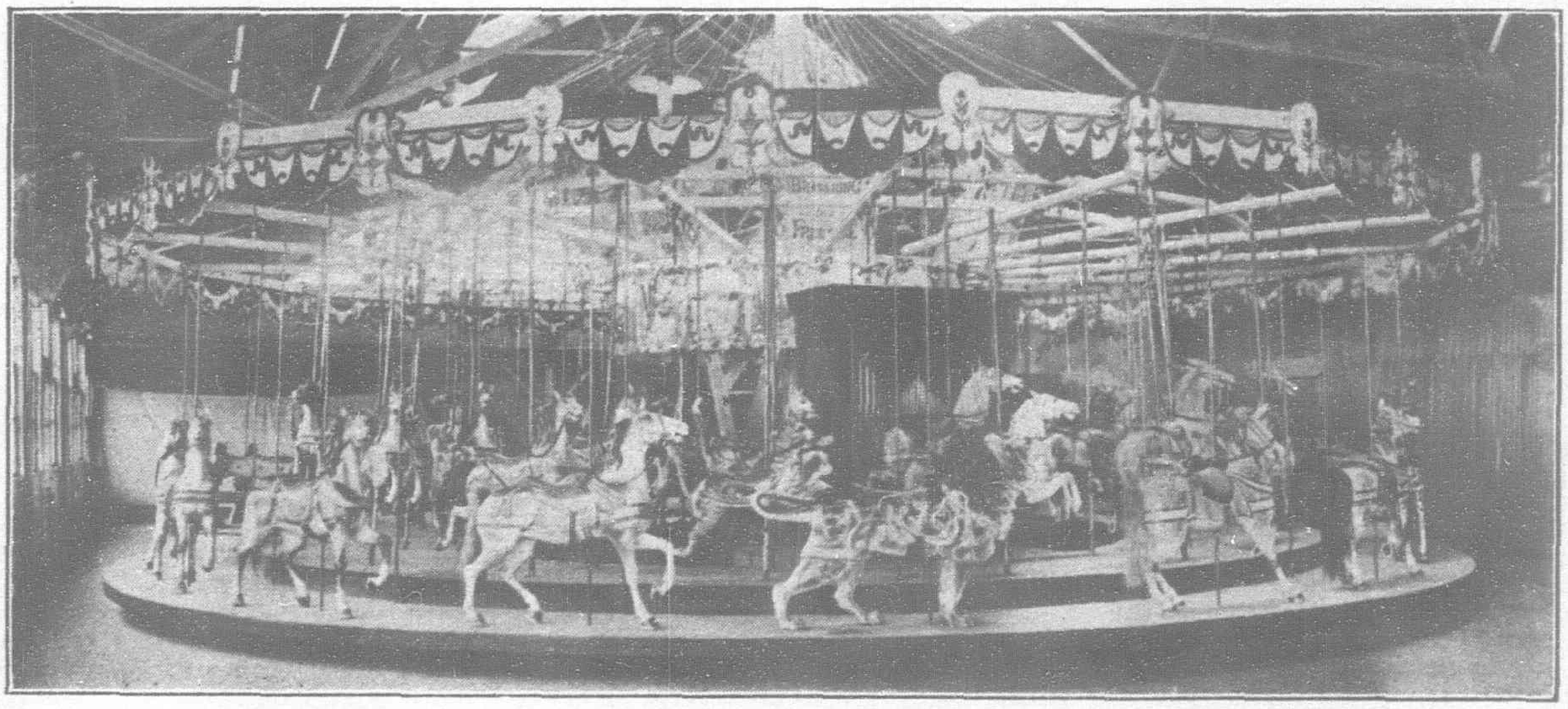

THE HELTER SKELTER

The company has secured 50,000 square meters (about 12 acres) of land situated conveniently in the district of Tondo, the area covered being known as the Island of Palomar. Of this area four acres are now available and will be utilized for the initial attractions. From time to time, the features of amusement will be increased and kept to date, until the entire area is included in the park proper.

The dearth of amusement in Manila of a healthy character appealed to the promoters of this enterprise as the opportunity for a most desirable investment, and in going over the situation, it was decided to give the public an aggregation of attractions similar to those that feature Coney Island and at a cost that would place the park within the reach of all. The intention is not only to make the park attractive but to guarantee the patrons an opportunity for diversion under the most favorable and pleasing conditions. The entrance fee to the grounds will not exceed ten centavos and special features will be charged for at similar reasonable rates. The strictest surveillance will be maintained so as to protect patrons from the slightest annoyance and family parties will be encouraged.

Some idea may be gathered of the attractions by the illustrations which accompany this article. The principal feature will be the "Helter Skelter." This has a tower 25 feet high and a winding chute 60 feet long. The participant will take a slide from the top to the bottom and enjoy all the sensations of a parachute drop before landing on his or her feet at the bottom. The Merry-Go-Round will be about 32 feet in diameter and provided with moving animals as well as many sensational illusions effected by mirrors. This feature will cost about ₱16,000. The organ that furnishes the necessary music is to be operated by electricity.

The illuminating tower itself will prove an attraction. It will be so located that the entire park will be as bright with light as at mid-day. It will be about 25 feet square at the base and tower into the air a distance of 75 feet with the top about five feet square, and upon which


THE MERRY-GO-ROUND

a large searchlight will be located. A bandstand capable of accommodating an orchestra of 50 pieces will be built in the tower about 10 feet from the base.

The dancing pavilion alone will cover an area of 70×100 feet, the *floor of which is to be built* of Ipil, and balconies will be constructed up and down. In connection with the pavilion, a bandstand large enough to accommodate an orchestra of 15 pieces will be constructed in a avorable location.

THE VIRGINIA REEL

In addition to the attractions mentioned over 25 distinct features, borrowed from Coney Island, will be included, and among them a "native circus," "Chinese theatre," "vaudeville in Spanish and English," "moving pictures," "penny arcade," "egg farm," "mirror maze," "inverted house," "dolly baby rocks," "Japanese ping-pong," "human roulette wheel, 100 feet in diameter," etc.

In addition to all these varied opportunities for sensation, an entire square of the park will be set aside for the children where they may enjoy themselves under the supervision of trained attendants in the teeter-totter and a thousand other ways known only to the expert in pleasing the young idea.

The company is busy organizing a complete fire department with equipment so that the most effective fire protection will be provided in time the day of the opening of the park.

The idea is that young and old need diversion in the tropics and that the more cheerful, sensational and innocent it is presented, the better it will be for the community. The promoters are men of the highest standing and there is no doubt of the success of the venture.

*A VALUABLE DISCOVERY

A PHILIPPINE SUBSTITUTE FOR *LIGNUM-VITAE*

The scarcity in the supply of an important wood used by hardwood manufacturers in the United States has created an unexpected opening for a wood from the Philippine forests. It is believed that this product offers a satisfactory and inexpensive substitute for a rare and costly West Indian wood, greatly in demand among manufacturers.

In the past, the forests of the West Indies have produced enough of the wood known as Lignum-vitae † to answer all the demands of the United States manufacturers. It was and is valued chiefly for its great hardness, its durability, its imperviousness to decay and its strength; no wood in the world having been discovered with just this peculiar combination of qualities. It is greatly in demand for sporting goods such as ten pins and bowling balls, for use in shipbuilding, and, in fact, for any use where wood of very great hardness, resistance, and weight is required and where wood is preferable to metal.

In 1906 such demands had been made on the West Indian forests for this wood that it was suddenly discovered that the supply of the Lignum-vitae tree had been almost exhausted. Consternation seized the manufacturers who were constantly making use of the product and they began writing to other parts of the world to learn whether there were other available forests of this valuable tree and, if not, what was the nearest substitute that could be obtained.

One of these letters reached Major Ahern of the Philippine Bureau of Forestry, requesting information concerning Philippine woods. The letter was from the National Association of Manufacturers with headquarters at New York and stated that having made inquiries in various countries, the manufacturers had been informed that probably the most favorable place in the world in which to find this precious wood was in the Philippine Islands.

The Bureau of Forestry finally proved that a wood answering the requirements of the manufacturers has been found. This wood is called Mancono. Its technical name is Xanthostemon verdugonianus, Naves. There is a fortune waiting for the man who will exploit it.

The Mancono tree grows in considerable abundance in northeastern Mindanao. Small areas contain almost pure stands of it. It has hitherto escaped the attention of those interested in exploiting the riches of the Philippines and is little known in general trade. The wood is so heavy and hard that it is difficult to cut, and the splitting of a log of it is almost impossible.

However, it grows in places easily accessible to those wishing to work it, being usually found along steep slopes near beaches whence it can be shipped by water transportation. Also, as it is only desired in short lengths, work on it can all be done in the forests where it is cut and the material can be easily handled. Thus the two great drawbacks which attend the marketing of much of the Philippine forest material are done away with; namely, the difficulty of securing land transportation from inaccessible forest districts and the difficulty of securing large numbers of laborers to cut the trees in these inaccessible districts.

The wood of the Mancono tree, even in the tropics where rot and decay are so ready to seize on all perishable materials is practically indestructible. White ants, the curse of the tropics, do not attack it. This quality has already made the wood esteemed by many of the Filipinos in the southern islands who use the cumbersome logs for posts and ground timbers.

The heartwood of the tree is uniformly reddish black, but after a number of years of seasoning it turns a black walnut color. Like all Philippine hard woods, it takes a fine polish.

The wood is of such extreme heaviness and density that it sinks in water. For this reason, in taking the logs from the beach where they are cut to the steamer that is to carry them, native boats are required between which the logs are rafted and kept on the surface of the water.

After two years of experiment in which the Bureau of Forestry is satisfied as to the relative merits of this wood and Lignum-vitae, the following facts are announced:

(1) The Philippine forests possess a tree whose wood, for at least some of the practical purposes required by the lumbermen in America, is equal to that of the rare Lignum-vitae. It is probably even harder though a trifle more light.

(2) It is found in merchantable sizes and quantities in areas of sufficient extent to warrant its exploitation, and with proper care in cutting the supply may be made to last indefinitely.

(3) It grows in places immediately accessible for cutting and the difficulties of transportation encountered in exploiting many Philippine woods are minimized.

(4) The wood has been used in shipbuilding as a substitute for Lignum-vitae at the United States Naval Station at Cavite, P. I., and the head of the steam engineering department pronounces it a perfect success after a year's trial. It has also been satisfactorily tested in the shipyard of the Bureau of Navigation in Manila.

(5) Most important of all, it can be produced and delivered in New York at a profit, for about four centavos a pound, while the costly Lignum-vitae brings from thirty to sixty centavos (fifteen to thirty cents, United States currency) for the same amount.

The Philippines should prove attractive for the exploiter of this rare timber. Likewise the hardwood manufacturers of America, who are casting about for a substitute of a fast diminishing wood, should find it to their profit to purchase the Philippine product, Mancono.

---

*Bulletin Philippine Bureau of Forestry.

†Samples of this wood may be had by applying, in person or by letter, to the Bureau of Forestry, Manila, free of charge.

Estimates for Buildings for Consular Offices in China, Korea, and Japan*

(Continued from August Number.)

The most suitable site in Newchwang has a depth of 500 feet and a frontage of 250 feet on the main business thoroughfare. It has buildings on it, not modern, and their combined value is less than $15,000. This lot also contains a pond, which is convenient as a source of water supply for scrubbing and other purposes, there being up system of waterworks in Newchwang. The site can be purchased for $80,640. The Consul General says, however, that one-half of this lot, or 125 feet frontage, would be sufficient by tearing down the old buildings and erecting new, which would cost, including buildings, $55,000 or $60,000. Suitable buildings are estimated at $18,000. No plans of buildings have been given by the Consul General.

Another site, about 2 acres, and having buildings that could be utilized, can be bought for $20,000. This is not on the main thoroughfare, and does not front on a main street, but can be approached from either side.

Another available site is unimproved, and would require filling in. Price, $12,000. To improve that site and erect buildings would require $18,000, or a total of $30,000. This lot contains less than 1½ acres.

Minister Rockhill says prices of land have increased enormously in the last two years, but a reaction is expected. Distances are not great, and there is still plenty of available land. The city is on a mud bank, all equally unattractive until planted.

RECOMMENDATIONS.

Purchase of about 3 acres of land	$30,000
Erection of buildings	20,000
Total	$50,000

SHANGHAI.

The United States maintains at present six branches of Government work at Shanghai, viz., the consulate, with the consular court, the inspector of consulates in the Far East, the newly created United States court for China, the postal agency, the office of the Public Health and Marine Hospital Service, and the consular jail, which serves for all stations in China.

The consulate requires accommodations for the Consul General, the Chinese room, the record room, the consular court and library, and the storage room; all absolutely indispensable.

The inspector of consulates will make Shanghai his headquarters, and will require an office there.

The United States court consists of judge, district attorney, clerk, marshal, and will require a court room and four offices.

The postal agency at present occupies three rooms; all necessary.

The marine hospital surgeon (now separate from the consulate) requires two offices and a fumigating room. He should be in the consular building, as his work is connected with that of the consulate.

The jail should be a well ventilated building, with a compound for exercise, and modern jail equipment.

If the Government should establish inspectors of Chinese immigration, office room for them would be required.

The contemplated plan of having a commercial library and museum would require a good deal of space.

The present consular quarters are wretched in the extreme. The building itself is old and infirm, and is situated behind the godowns (warehouses) of the Japanese Steamship Company, and in a part of the city remote from the centre of business activity. With one exception, that of Austria, it is the poorest of the consulates in Shanghai, and has the worst location. However, it is certain that no better building in a better location can be obtained for anything like the rent we pay.

The jail attached to this consulate is a disgrace, and, in the light of modern practice, inhumane. It lacks light, ventilation, and a place for exercise; moreover, it is so insecure that escapes would be common were there any place for a fugitive to go. As it is, prisoners by the simplest methods of jail breaking have gotten at large when it pleased them to do so, and this without fault on the part of the keeper. It is not possible to remedy these conditions in regard to the jail as long as the consulate remains in its present quarters. The building does not admit of extension of the jail facilities, every portion being occupied now.

The interior of the building in general is shabby, and redecorating should be done. As we are required by the terms of occupancy to do all interior repair, we are not justified in incurring any large amount of expense for the services and material.

The Consul General here cannot have his wife and children live at the consulate on account of the character of the locality; it is not a fit place for women and children. With one exception, he is the only consul not housed by his Government. The rent, including that which is now paid and that which the Government will have to pay for the new United States court, immigration offices, etc., will approximate about $10,000 a year.

The lease of the present consular building will expire in about four years, and the landlord has stated that the rent will then be doubled. As the maximum rent is now paid, it would mean that the excess will have to come out of the pocket of the Consul General or that the offices would have to be removed to a cheaper building, remote from the business district. At present the post office is in the same building and contributes one-half of the total rent, and there is still left a small balance to be paid by the Consul General.

The post office is an important one, handling about 12,000 bags of mail a year, and receives about 200 bags at a time. The German Government has a separate post office, costing about $250,000, and it employs about twenty-persons to carry on the postal business. The English have a separate post office, valued at $50,000, and have a staff of British and natives of about twenty. The Japanese, Russian and French Governments maintain separate post offices. The American post office matter exceeds the German and that of the other governments, with the possible exception of the English.

August 9, 1906, Mr. Rockhill enclosed a dispatch from the Consul General, in which it was stated that he could purchase suitable property near the German and Japanese consulates for $216,000. This property comprises nearly an acre, and situated upon it are buildings which are in good repair and can be easily altered for the purposes of the Government. They will afford all the room needed for offices and residential quarters for the whole staff. The location is the finest in Shanghai, overlooking the whole harbor. Mr. Rockhill estimates that $25,000 would put the property in good condition. September 11, 1906, Consul General Rodgers enclosed a series of photographs of the property.

RECOMMENDATIONS.

Purchase of the property described by the consul	$216,000
Repairs	25,000
Total	$241,000

TIENTSIN

The cost of a site in the immediate business centre of the city is practically prohibitive, being about $9,360 per mow (one-sixth acre).

The best available site is one known as the Morling property, facing on three streets, and completely filled up to a height of 3 feet above the street level, an important item, as practically all Tientsin requires filling. This property is about 2 acres in extent and can be bought for $30,240.

Buildings required are: A two story residence, a two story office building, a jail, a stable and servants' quarters.

The residence should have a reception room, a dining room, a sitting room, hall, pantry, etc., *on the ground floor*, and five bedrooms, five bathrooms and a storeroom on the second floor.

The office building should have four offices, a court room, on the ground floor, and residences for vice consul and for student interpreter on the second floor.

The jail should include a small residence for the marshal. Floor plans of the residence enclosed, with Minister Rockhill's dispatch of August 9, 1906.

RECOMMENDATIONS

Purchase of Morling property	$30,000
Erection of Buildings	35,000
Total	$65,000

Tientsin is a city of about 1,000,000 inhabitants, and was opened to foreign trade in 1858, since which time it has grown rapidly. Its commercial activity is one of the first things which strikes the visitor, as the transfer of cargoes is the most conspicuous form of work one sees. The boat crowded river ways extend troughout the city and give a total length of crowded river way of 10 to 12 miles. Thousands of coolies fill the passageways, carrying articles of commerce to and from these boats.

The foreign settlements consist of the British, French, Japanese, German, Russian, Italian and Austrian. In the first four concessions the improvements rank with many of the United States. In the native city radical improvements are going on. The city wall, built in 1405, has been razed and its base forms a splendid roadway. The streets have been straightened, and in many places widened, and sewers and waterworks are constructed.

KOBE

The most desirable site would be on the water front, where it would be necessary to purchase a whole lot, 21,350 square feet (about 146 feet each way), at a cost of $70,000. These lots are held in perpetuity on leases granted by Japan prior to treaty revision, subject to nominal ground rental by way of taxes.

Consul Sharp estimates that the following floor space would be necessary for consular purposes:

Consular room, 27 by 20 feet	$540
Shipping office, 30 by 20 feet	600
Vice consul's room, 15 by 20 feet	300
Stamping room, 12 by 15 feet	180
Typewriters' room, 10 by 12 feet	120
Archives, 15 by 20 feet	300
Waiting room, 12 by 15 feet	180
Two storerooms, each 15 by 20 feet	600
Hall space, 9 by 114 feet	1,026
Two closets, each 6 by 9 feet	108
Eight rooms, halls and closets	$3,954

The same floor space is recommended for residential quarters, and also a separate outbuilding for servants' quarters, 1,080 square feet. Constructed of brick, with stone finishings, the estimated cost for all necessary buildings is $50,000.

RECOMMENDATIONS

Purchase of ground as above	$70,000
Erection of buildings	50,000
Total	$120,000

NAGASAKI

Consul Harris estimates the cost of ground and buildings as follows: Ground, $25,000; buildings, $30,000.

He recommends that efforts be made to purchase a very desirable and practically vacant lot which is offered for $42,500, but should bring only $25,000, or $30,000 at most, as there is no demand justifying the price asked. It is within three minutes' walk of custom house, banks, consulates, etc., and directly across the "bund" from the principal landing place for passengers.

(Continued on page 181)

**Journal of the American Asiatic Association.*

SUCTION GAS PRODUCER POWER

American Producers for American Coals and Lignites

By L. P. TOLMAN

DEVELOPMENT.

Probably no invention has ever come into public favor in so short a time as the Suction Gas Producer. Introduced into the United States about five years ago, this system of developing power from coal and lignite has already become a commercial reality and is fast gaining approval among engineers and power users.

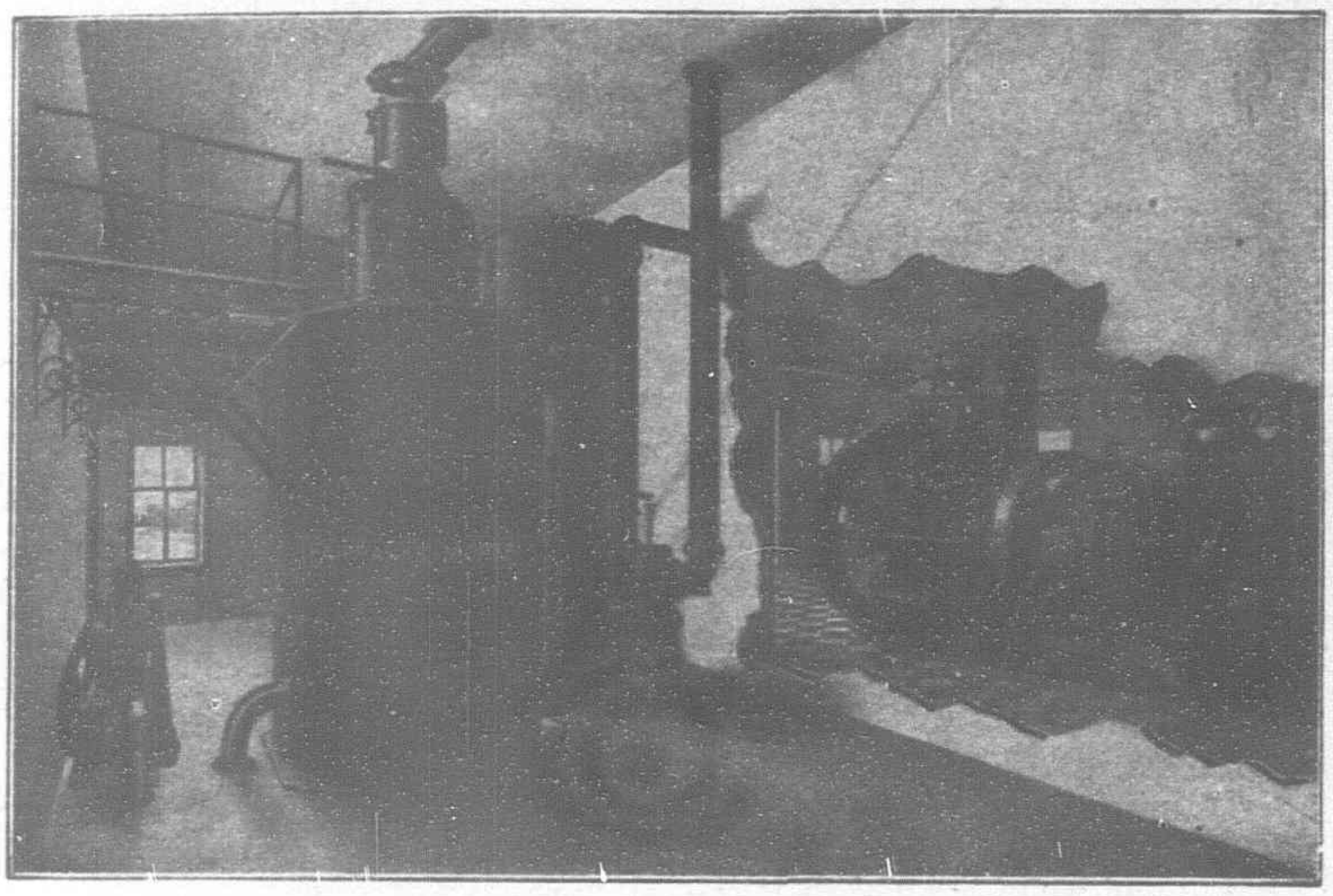


FIG. 1—A COMPLETE PRODUCER GAS POWER PLANT WITH ENGINE DIRECT CONNECTED TO ELECTRIC GENERATOR

The early history of Producer Gas dates as far back as the year 1509, at about which time the "Fulen Heitzen" first became known, and were described by H. Brunschwyk in his book "Ars Distilandi de Compositis," or "The Art of Distilling Compounds," which was published in Strassburg, Germany.

The first plant similar to those now in use was built by Mr. Emerson Dowson, who has the distinction of introducing in England, in 1878, the first practical Gas Producer for power. This was of the "pressure" type. A small steam boiler was necessary, as well as a large gas holder. Mr. Dowson's plants were successful and are still in regular service. Anthracite is the usual fuel.

The next substantial progressive step was taken when Dr. Ludwig Mond, in England, in 1889, developed the first successful soft coal producer. This became a standard for sizes of 250 horse power and larger but proved too elaborate and expensive for use in smaller sizes. With this plant a large gas holder is needed, also a steam boiler and an elaborate system of gas washers, purifiers, and economizers.

Then followed the invention of Herr C. Wiegand of Hanover, Germany, who in 1895 took out the first patent (No. 88044—German) on the principle of the modern Suction Gas Producer. The importance of this invention was not realized in Germany until some years later.

In France, during the same year, Benier built what is believed to be the first practical Suction Gas Producer. This was a success as soon as the necessary changes had been made in the gas engine to adapt it to the "suction" system. It is surprising in this case, as with most other great inventions now in general use, that an apparatus so simple and easily understood was not developed long before.

About five years ago American manufacturers began to take a live interest in the success of European, and especially German, Suction Gas Power Plants. American engineers visited Europe and in this way learned at first hand what was being done abroad. As early as the year 1904, it is estimated that there were over 10,000 Suction Gas Power Plants in Germany alone. They had come into general use and were found in the finest hotels, stores, factories, etc., for electric lighting and other power purposes. The actual users of the plants were enthusiastic over the results.

That Producer Gas Power is a pronounced success in the United States is evidenced by the large number of satisfactory installations already in operation on American coals. It is estimated that there are over 500 Producer Power Plants in this country, having an aggregate of 150,000 horse power. Of these, about eighty-five per cent are of the "suction" type and fifteen per cent of the "pressure" type. The Suction Plants average approximately 100 horse power each while Pressure Plants are usually built in sizes larger than 1,000 horse power.

This article deals with Suction Gas Power Plants in single units of 200 horse power, or smaller, and complete plants made up of a number of such units 1,000 horse power, or larger. This range of sizes covers the requirements of the great majority of power users.

COMPARATIVE WASTE WITH STEAM AND PRODUCER GAS POWER.

This idea is illustrated graphically. Fig. 2 illustrates a modern steam plant with its many complications, including compound condensing steam engine with water tube boiler. This plant converts 8% of the total energy of the fuel into useful work. (In actual practice the percentage utilized is usually less.) In other words, 92% or more of the energy in the coal goes to waste as smoke up the chimney, exhaust from the engine, heat radiation, etc.

A 150 horse power steam plant of this type, running at two-thirds load, 3,100 hours per year, uses approximately 4½ lbs. coal per brake horse power per hour. With coal at $2.75 per ton, the fuel alone costs $1,918.12 per year. In addition, the cost of attendance is a large item of expense, and the boiler, especially, calls for constant attention, cleaning, and repairs.

Fig. 3 illustrates the ordinary throttling governor steam engine with tubular boiler, a type which is in very general use, especially in sizes from 15 to 200 horse power. This plant converts 5% (though usually much less) of the total energy of the fuel into useful work. In small steam plants the total amount of energy utilized is often not over two or three per cent. In other words, 95% or more of the energy in the coal goes to waste as smoke up the chimney, exhaust from the engine, heat radiation, etc.

A 150 horse power steam plant of this type, running at two-thirds load, 3,100 hours per year, uses approximately 7 lbs. of coal per brake horse power per hour. With coal at $2.75 per ton, the fuel alone costs $2,983.75 per year. In addition, it requires the entire time of at least one man to operate the plant. The boiler, especially, requires constant care, cleaning and repairs, and is always a source of danger.

Fig. 4 illustrates a Suction Gas Producer Power Plant. The apparatus is simple, reliable, and amazingly economical. With this plant 18% of the total energy of the fuel is converted into useful work. (Varies according to conditions from fifteen to twenty-one and one-half per cent.) This means that a Suction Gas Producer Plant uses from one-half to one-fourth as much coal for a given amount of power as a steam plant.

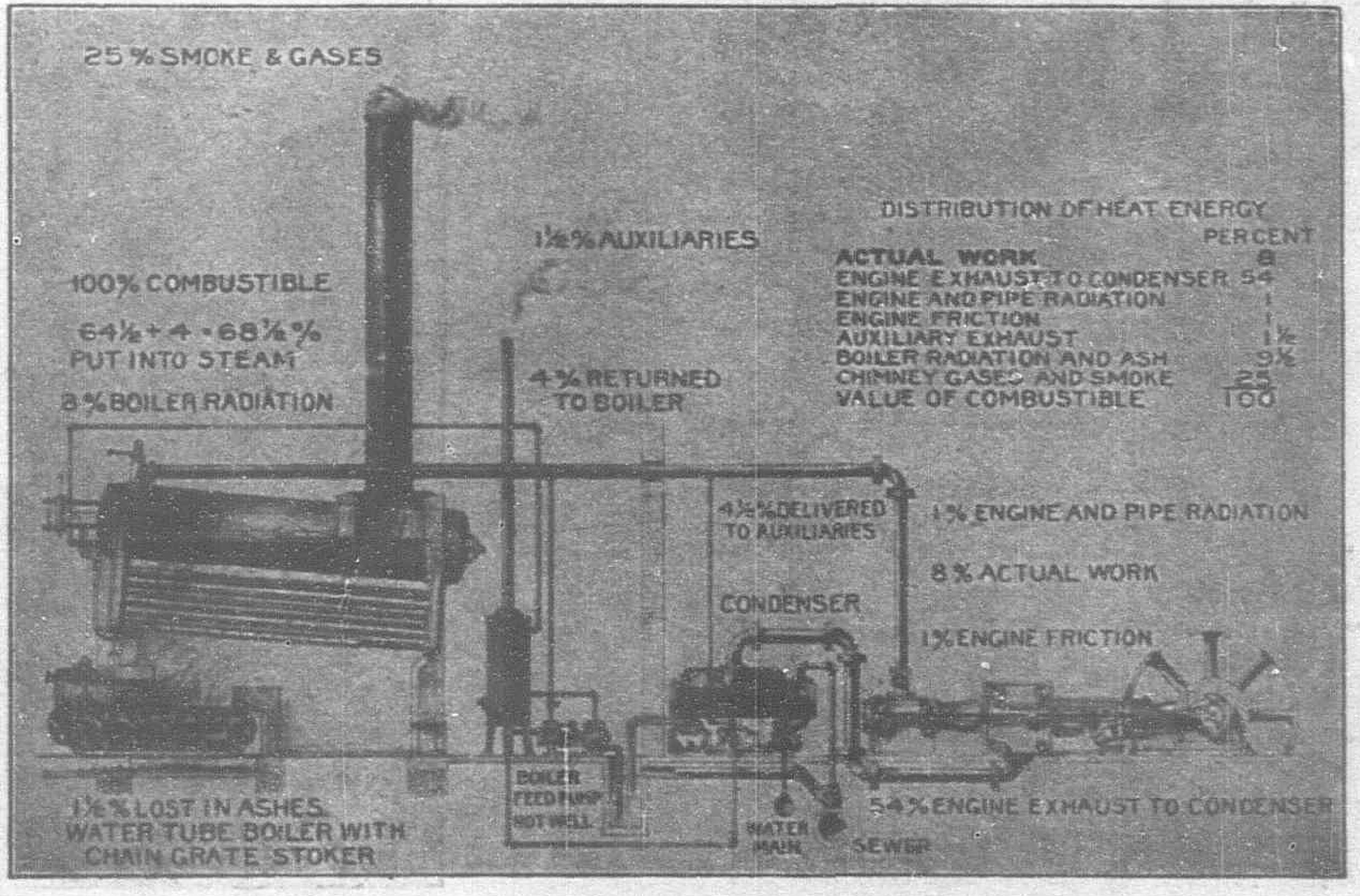

25% SMOKE & GASES
100% COMBUSTIBLE
64½+4=68½%
PUT INTO STEAM
8% BOILER RADIATION
1½% AUXILIARIES
4% RETURNED TO BOILER
DISTRIBUTION OF HEAT ENERGY
PERCENT
ACTUAL WORK 8
ENGINE EXHAUST TO CONDENSER 54
ENGINE AND PIPE RADIATION 1
ENGINE FRICTION 1
AUXILIARY EXHAUST 1½
BOILER RADIATION AND ASH 9½
CHIMNEY GASES AND SMOKE 25
VALUE OF COMBUSTIBLE 100
4½% DELIVERED TO AUXILIARIES
1% ENGINE AND PIPE RADIATION
8% ACTUAL WORK
CONDENSER
1% ENGINE FRICTION
1½% LOST IN ASHES
WATER TUBE BOILER WITH CHAIN GRATE STOKER
BOILER FEED PUMP HOT WELL
WATER MAIN
SEWER
54% ENGINE EXHAUST TO CONDENSER

FIG. 2—COMPOUND CONDENSING STEAM PLANT

A 150 horse power Suction Producer Plant, running two-thirds load, 3,100 hours per year, uses approximately 1½ lbs. of coal per brake horse power per hour. (Tests have been made showing a consumption of less than 1¼ lbs. at two-thirds load and less than one lb. at full load.) With anthracite at $5.00 per ton, the fuel alone costs $1,162.50 per year. Furthermore, the cost of attendance can be reduced materially with a Producer Plant, as the operator can spend part of his time in other useful work.

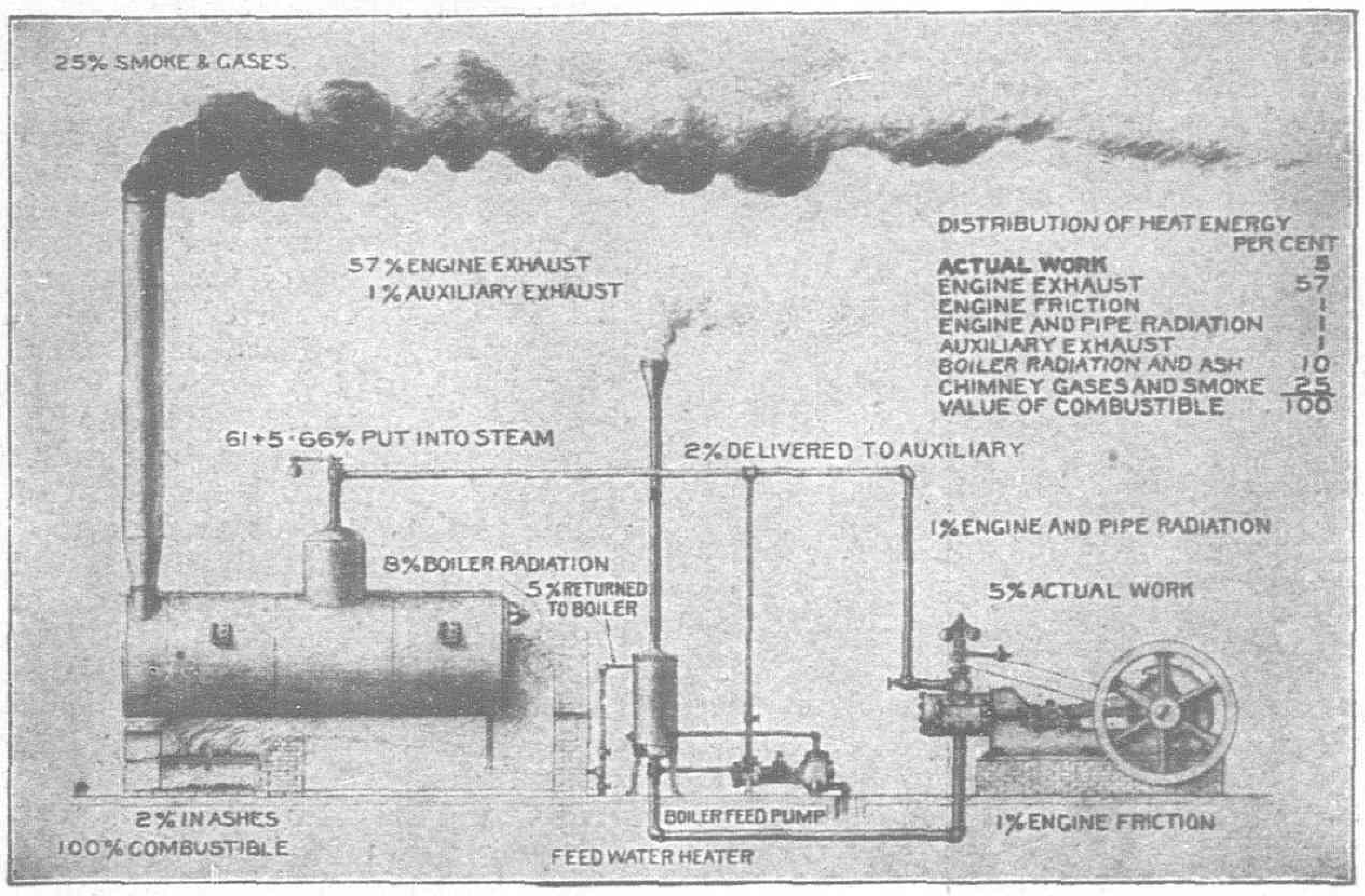


FIG. 3—SIMPLE STEAM ENGINE AND TUBULAR BOILER

GOVERNMENT TESTS.

Much valuable information is given in the report of the United States Geological Survey concerning the fuel testing plant at the Louisiana Purchase Expositon, St. Louis, Mo. For three years the government experts conducted a series of tests on many samples of coal from mines all over the country. Briefly, the apparatus included a non-condensing Corliss Engine Steam Plant with water tube boiler and a Pressure Type Producer with three-cylinder vertical gas engine.

From the summary of results obtained from a long series of tests, the fuel consumption in Pressure Type Producer Plant varied from 1.18 to 3.47 lbs. per brake horse power per hour, the average being approximately 1¾ lbs. The average with the Corliss Steam Plant was found to be approximately 4½ lbs., using similar fuels. With lignite, the consumption in Pressure Producer Plant was from 1.95 to 3.47 lbs., the average of five samples actually figuring 2.60 lbs. With Corliss Steam Plant using lignite, the average consumption of "coal as fired" (not "dry coal") was approximately 7 lbs.

While most of the above tests were on bituminous coals, which cannot be used advantageously in a Suction Producer, yet the consumption of anthracite in the latter is usually less than as stated for bituminous coal in "pressure" type producer, probably due to the fact that there is less resistance to the flow of gas in the suction type. For example, tests on lignite in a Suction Producer commonly show a consumption of 2 to 2¼ lbs., whereas from the five lignite tests at St. Louis the average is 2.60 lbs. in a Pressure Producer Plant.

ADVANTAGES OF SUCTION GAS PRODUCER POWER.

We have already discussed the high thermal efficiency of the Suction Gas Producer Plant. The most important and the most practical commercial advantage is the economy effected in the cost of developing power. If there were no other advantages, this one feature would be sufficient reason for installing this system. Other advantages may be summed up briefly.

Simplicity. The producer, in which fuel gas is generated from coal, is almost as simple as an ordinary furnace for heating purposes. The gas engine is entirely automatic in operation and needs little more than the ordinary cleaning and care as to lubrication.

Absolute safety. There is no danger from explosion or from fire. It is absolutely safe, even in the hands of men with little mechanical training, and the many plants which are in continuous operation, some of them twenty and even twenty-four hours a day, indicate that they are thoroughly reliable and will stand hard, everyday usage. Boiler insurance is unnecessary with Producer Plants and the troubles and dangers encountered with steam boilers are entirely avoided. The complete gas engine and Suction Producer Plant is almost entirely automatic in operation, very little attention being required. Ordinarily the operator only needs to spend ten to fifteen minutes about every two hours to dump a few buckets of coal into the producer and give general attention to the plant. He can spend part of his time in other useful work and an extra man as fireman is not required, even with plants from 400 to 500 horse power.

No smoke stacks and no smoke. Hundreds of thousands of dollars which are now spent annually in building smoke stacks can be saved; and what is of greater importance, the smoke nuisance can be entirely abated. The value of this feature can hardly be over-estimated, and such an ideal condition seems almost incredible to those who are not familiar with the subject.

Less coal to be handled and stored. Where the Suction Gas Producer Plant uses 1¼ or 1½ lbs. of coal, the steam plant commonly requires 4 to 6 lbs. or more. Moreover, with the Producer Plant there are fewer ashes to be handled and disposed of.

Starting. The producer will hold fire all night or even for several days, and the proper quality of gas can be generated after fifteen or twenty minutes blowing to revive the fire. The engine can easily be started on compressed air, and after getting up to speed it is then operated on Producer Gas.

Stand-over loss. The stand-over loss with Suction Producer amounts to about one-third as much as with a steam boiler. In other words, where the stand-over loss with a steam plant for fourteen hours amount to 600 to 800 lbs., or more, with a Suction Producer Plant of the same horse power this loss would not exceed 200 lbs.

SUCTION GAS PRODUCERS.

Fig. 5 illustrates an exterior view and Fig. 6 a sectional view of a Fairbanks-Morse Anthracite Suction Gas Producer. All of the principal features are clearly shown. Coal is admitted to the producer through a hopper at the top. This has double closure, so that fuel can be introduced without at the same time admitting air. In the process of partial combustion which takes place producer gas is generated.

The hot gas passes through a vaporizer in which a small amount of steam is formed which, with a limited amount of air, passes under the grate of the producer. In the smaller sizes, the vaporizer is at the top of the producer where it uses the waste heat from the escaping gas and where, at the same time, the water keeps the top from getting too hot. In the larger sizes the vaporizer is separate and connected to the producer by piping.

From the vaporizer, the hot gas flows through the scrubber, which is merely a cylindrical-shaped tank filled with coke, over which a spray of water is constantly sprinkled. The large contact surface of the coke effectually cleanses the gas of dust and impurities carried over from the producer, and also acts to cool the gas, which is essential in order to prepare it for use in the engine.

With certain fuels, especially when much tar is encountered, it is also necessary to add a sawdust purifier in order to abstract the last traces of tar from the gas. While not absolutely essential, yet it is always advisable to use a gas tank between the scrubber and the engine, in which a certain amount of gas is stored in ready use for the engine. This is especially desirable where the loads are variable.

In the care of the producer, the principal attention needed is to poke the fire every few hours, according to quality of the coal, in order to break up and remove clinkers, which would otherwise interfere with the making of sufficient gas. Poke holes are provided so that every part of the fire can be reached conveniently.

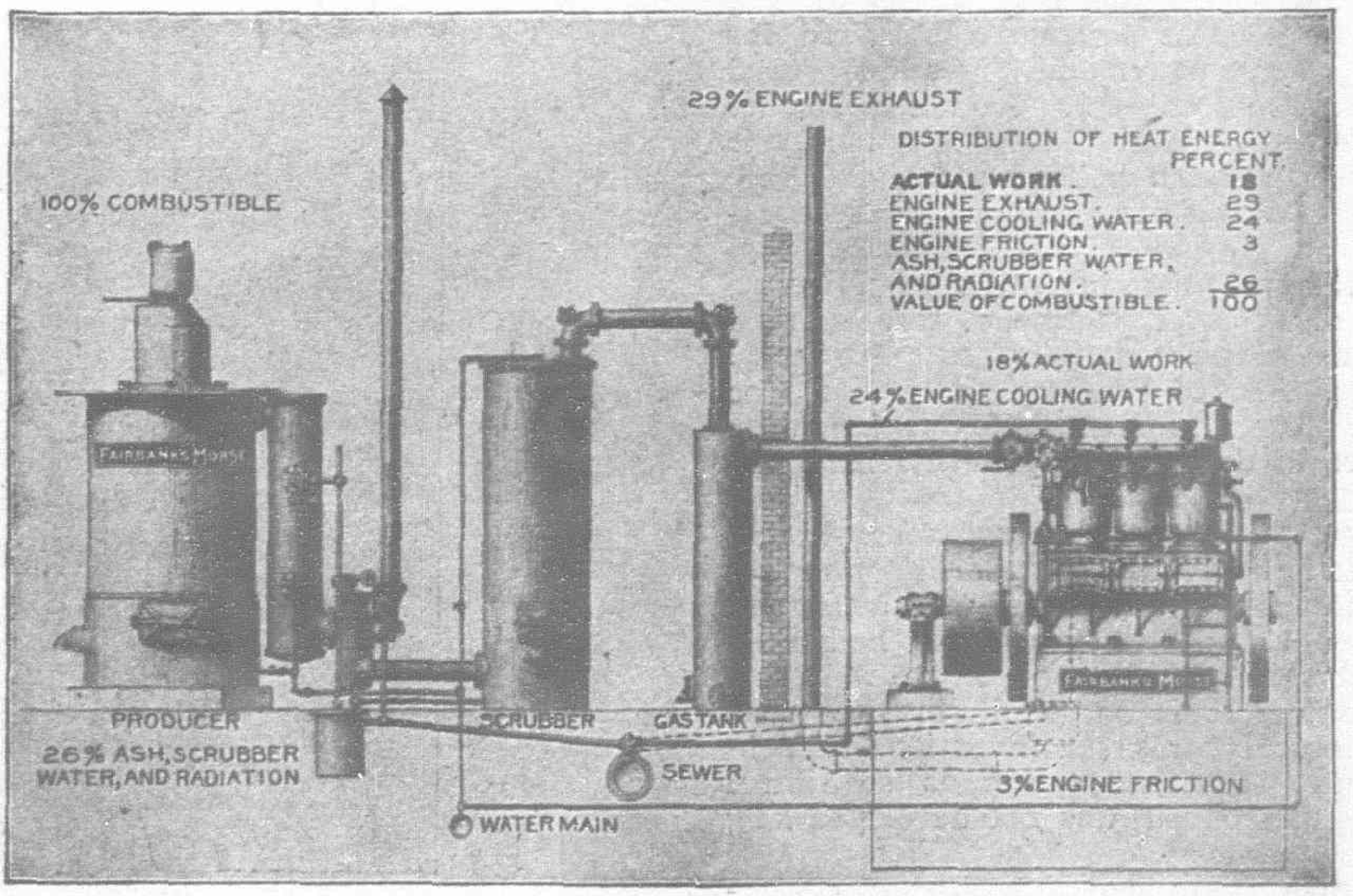


FIG. 4—SUCTION GAS PRODUCER POWER PLANT

FUELS.

Anthracite in "buckwheat" or "pea" sizes, lignite, coke, and charcoal are the fuels commonly used. In many sections these small sizes of anthracite can be bought cheaply in car lots. For example, in Chicago the car-load price of "buckwheat" anthracite is usually about $3.75 per ton. In some of the states west of Chicago the price varies from $5.00 to $7.00 per ton. At some points in southern Canada these small sizes of Penn. anthracite can be bought for from $3.00 to $4.00 per ton. In some of the eastern states, which are nearer the source of supply, the prices are even less.

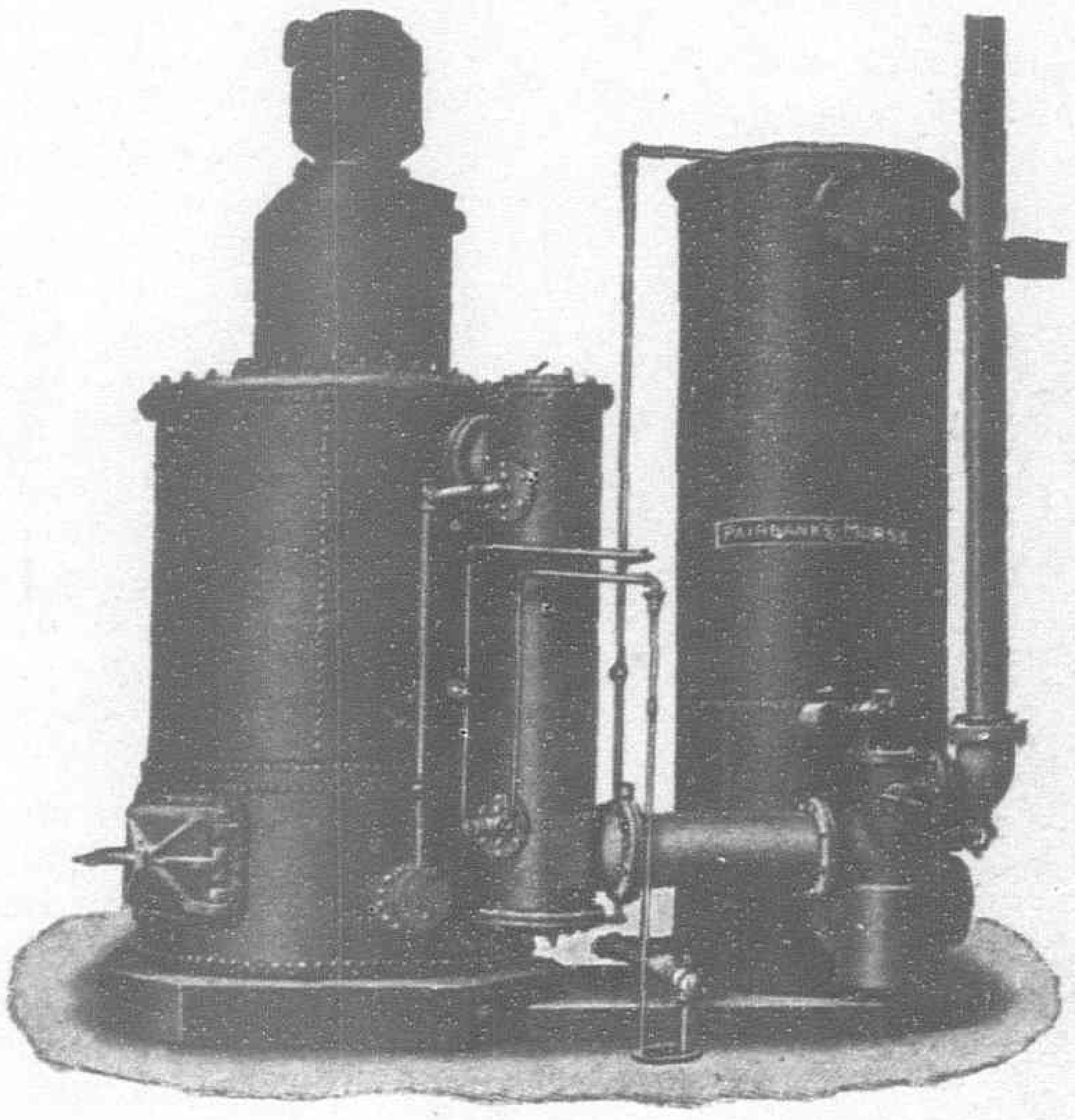


FIG. 5—FAIRBANKS-MORSE SUCTION GAS PRODUCER

The Lignite Producer offers a wonderfully cheap and reliable power in sections where this fuel is available. There are enormous deposits of lignite in Texas, Arkansas, Louisiana, North Dakota, Montana, Wyoming, Colorado, and other western states. This can usually be had at a price of from $1.00 to $3.00 per ton. At Smithville, Tex., where a 150 horse power Lignite Producer Plant is installed, the cost is $1.70 per ton. Lignite is of little value for steaming purposes, mostly due to the large amount of moisture, but it makes a most excellent fuel for the producer and in some respects is easier to handle than anthracite.

Coke and charcoal are economical fuels in some sections and can be used separately or mixed with anthracite.

In order to give some idea of the relative value of different Producer fuels, the results of tests on a number of samples are given. These samples were received from various parts of the United States, as well as from foreign countries. For example, in Table 1, giving the analyses of different anthracites, sample 65 is from Europe, 101 and 76 from Pennsylvania, 71 from Elk Mountain, Col., and 89 from Banff, B.C., Canada. The following tests were made by the Experimental Department at the works of Fairbanks, Morse & Co., Beloit, Wisconsin:

TABLE 1—ANTHRACITE.

Sample No.	B. T. U., per Lb.	Fixed Carbon.	Volatile.	Ash.	Moisture.	Sulphur.	Quality.
65	15,434	88.8	7.4	2.9	.9	.99	Very good.
101	13,952	83.5	5.5	8.2	2.8	.82	Good.
76	12,058	73.9	5.7	18.9	1.5	.86	Poor.
71	13,332	77.2	9.3	13.4	.1	.73	Fair.
89	14,746	79.3	8.1	10.5	2.1	.59	Good.

With the best coal there is little formation of clinker that will not work down to the grate without poking from the top, and many European Producers have no top poke holes. These are not successful on American coals, for while it is always desirable to get the best coal, it is practical to operate continuously on an average, or even a poor coal, by working the clinkers down through top poke holes. It is an advantage in using poor anthracite to have large producers.

TABLE 2—COKE.

Sample No.	B. T. U., per Lb.	Fixed Carbon.	Volatile.	Ash.	Moisture.	Sulphur.	Quality.
73	12,787	86.7	2.4	8.4	2.5	.93	Good.
77	14,213	92.3	1.7	5.8	.2	.6	Very good.
94	9,528	79.4	3.7	14.3	2.6	.59	Rather poor.
97	13,811	90.4	1.7	6.1	1.8	.55	Very good.

This fuel varies in quality according to the soft coal used in its manufacture and the

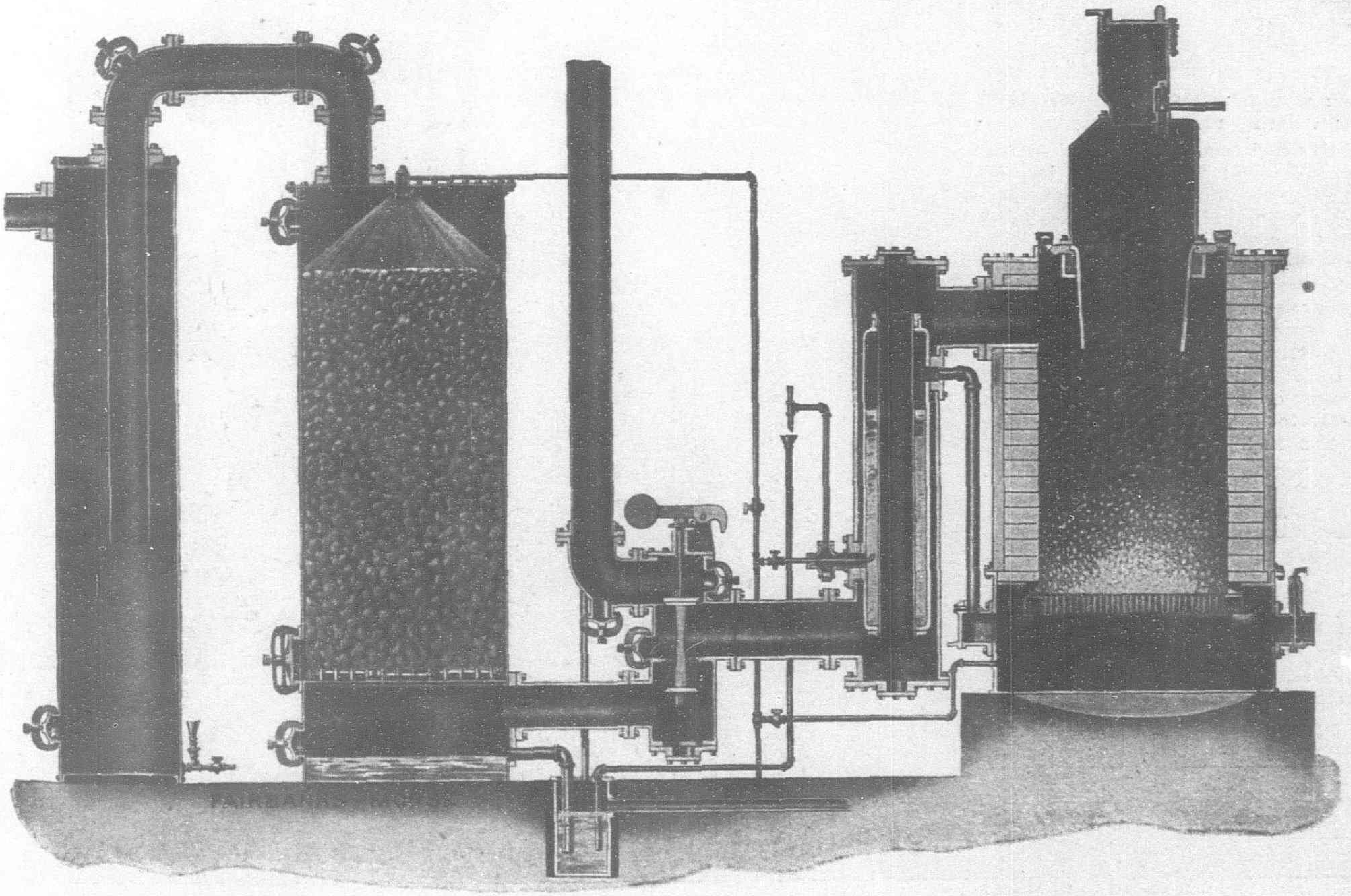


FIG. 6—SECTIONAL VIEW OF FAIRBANKS-MORSE SUCTION GAS PRODUCER

method of treatment. All coke must be crushed to pass a screen of 1-inch or 1¼-inch mesh, and must be freed from dust with a fine screen. It is usually advisable, where coke is used, to install one size larger producer than standard. A sawdust purifier is also desirable to remove dust, which is more abundant than with anthracite.

Gas from coke averages about 115 B.T.U. per cubic foot (lower heating value), while from anthracite it averages 125 or more. For this reason the power capacity of the engine will be a little less on coke gas, but not as much less in proportion as the heating value. Some coke will not maintain the fire hot enough. Mixing one part anthracite with two of coke usually corrects this.

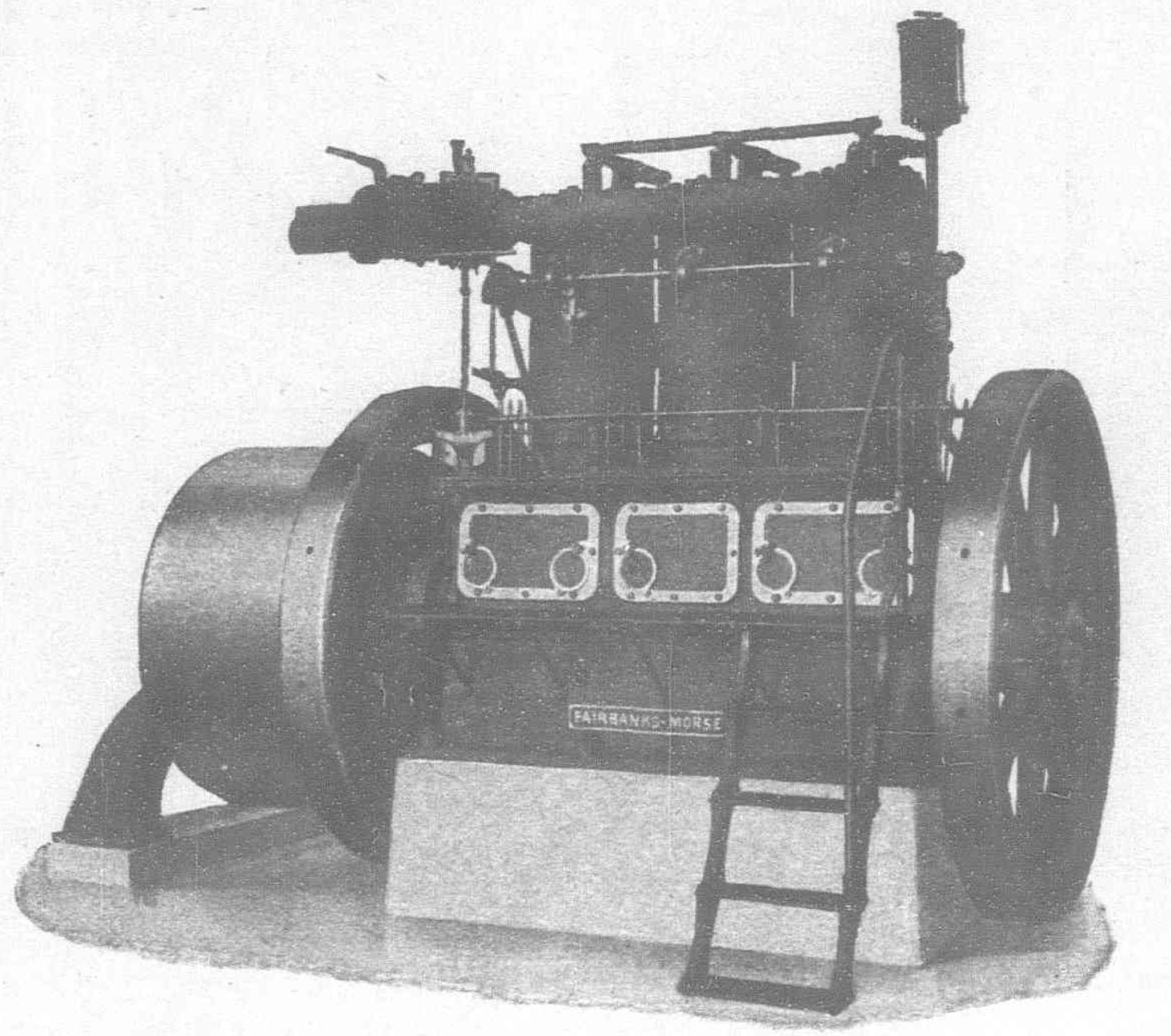


FIG. 7—MULTI-CYLINDER VERTICAL PRODUCER GAS ENGINE

CHARCOAL.

B. T. U., per pound, 14,438; Fixed Carbon, 81.3; Volatile, 12.9; Ash, 1.1.

The use of this fuel becomes practical by the addition of a centrifugal tar extractor located between the scrubber and a sawdust purifier. With this fuel, also, it is advisable to install one size larger producer than with anthracite.

Charcoal gas has a heating value averaging 130 B. T. U. or more, and because of this gives somewhat more power at the engine. It can be used in as large pieces as will readily go through the producer charging hopper. Less tar results from charcoal that is perfectly charred, but more or less material not perfectly charred is likely to be found. No clinkers are formed with this fuel.

TABLE 3—LIGNITE.

Sample No.	B. T. U. per Lb.	Fixed Carbon	Volatile	Ash	Moisture	Sulphur
51	11,634	20.3	46.1	6.3	27.3	1.01
57	8,753	29.4	35.7	7.1	27.8	.63
95	11,566	41.8	36.7	3.7	17.8	.41
103	9,765	36.8	35.8	10.7	17.2	4.09

Lignite cannot be used in standard Anthracite Producers, but the Fairbanks-Morse Lignite Producer operates very successfully with this fuel. Gas from lignite averages 130 B. T. U. per cubic foot. This fuel can be fed to producer in any size that will go through the charging hopper and it causes no serious trouble from clinkers.

PRODUCER GAS ENGINES—VERTICAL TYPE.

These engines are made in sizes of 200 horse power and smaller. By combining several units, plants of 800 to 1,000 horse power or larger have been installed. Fig. 7 illustrates a thoroughly modern Fairbanks-Morse Engine of this type. Sectional view is shown in Fig. 8. It may be of interest to engineers to note briefly a few of the carefully developed features in the design of these engines.

The present system of ignition is a great improvement over the methods formerly used. Make-and-break igniter is so constructed that it can be adjusted to spark as early or as late as desired, when engine is running or at rest, by means of a convenient hand lever. A single lever controls the time of ignition for all cylinders. This is a feature of much importance, especially with Producer Gas, as it permits timing the ignition to give the greatest possible power and economy with any particular grade of gas and when the engine is running. In addition, there is an independent adjustment for each igniter which is operated by drop cam.

Igniters can be removed, inspected, and cleaned, without interfering with other working parts, and they are located most conveniently. As the successful operation of a gas engine depends largely upon the igniter, the value of these features cannot be emphasized too strongly.

Both valves are mechanically operated from a single cam shaft, which is located inside the crank case. This minimizes the amount of noise, and furthermore the two-to-one reduction of gearing includes pinion which is made of alternate layers of steel and red fibre. These features insure a quiet running engine.

The simple fly-ball governor is of a most carefully designed pattern. This operates a balanced disk valve which is so construeted that there is no frictional contact or surface to become fouled by any impurities in the gas.

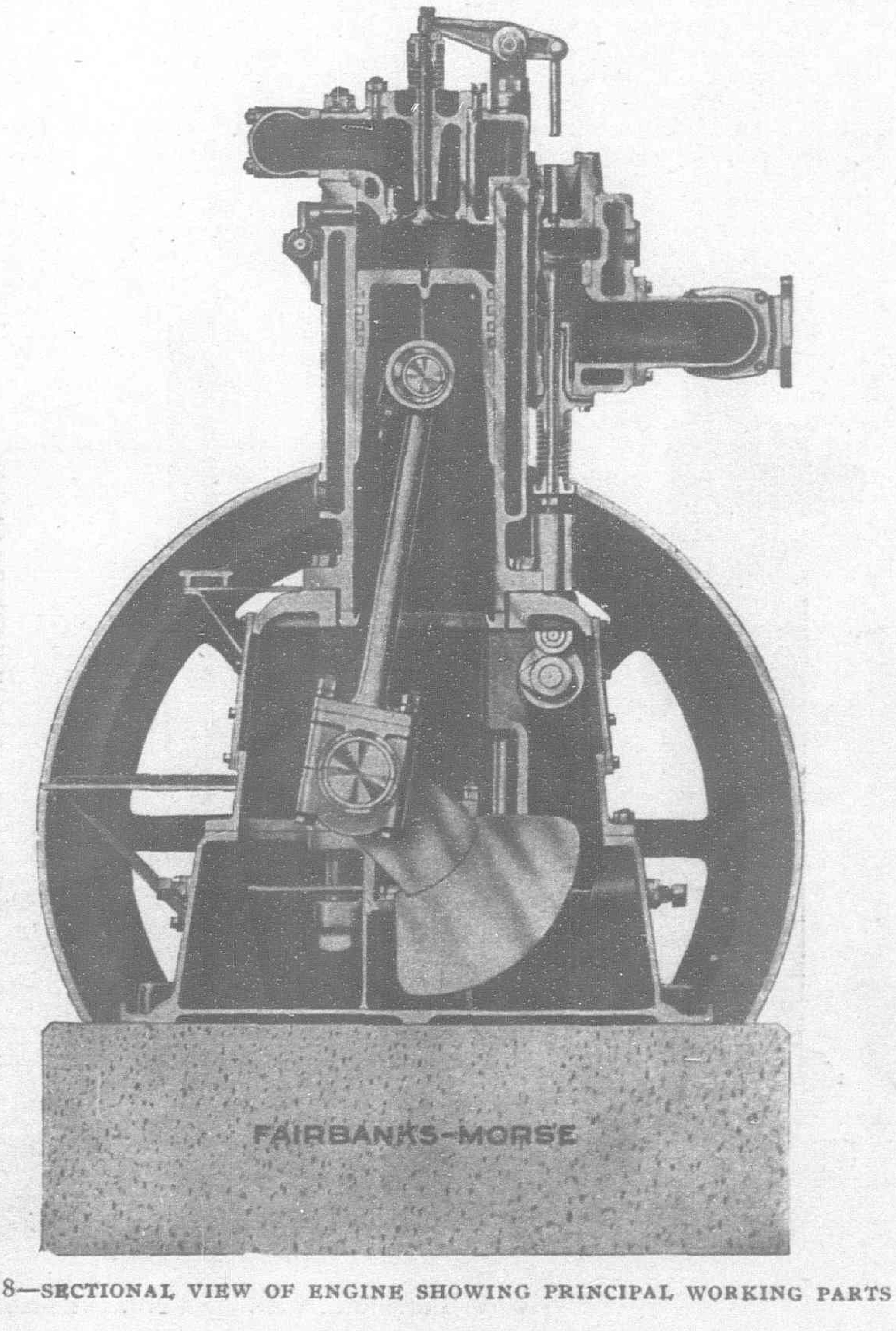


FIG. 8—SECTIONAL VIEW OF ENGINE SHOWING PRINCIPAL WORKING PARTS

This is especially important with engines operating on Producer Gas. The governor insures very close regulation, adapting the engine for electric lighting and other service requiring uniform movement.

Lubrication is effected by means of a single elevated oil reservoir, which is provided with separate brass pipe with individual sight feed for each bearing. This is a most effective system of engine lubrication and has been adopted as the best to be had. The drip from the different bearings collects in the base of the engine, which is drained by means of a small pump. The oil is run through a filter and is then used over again.

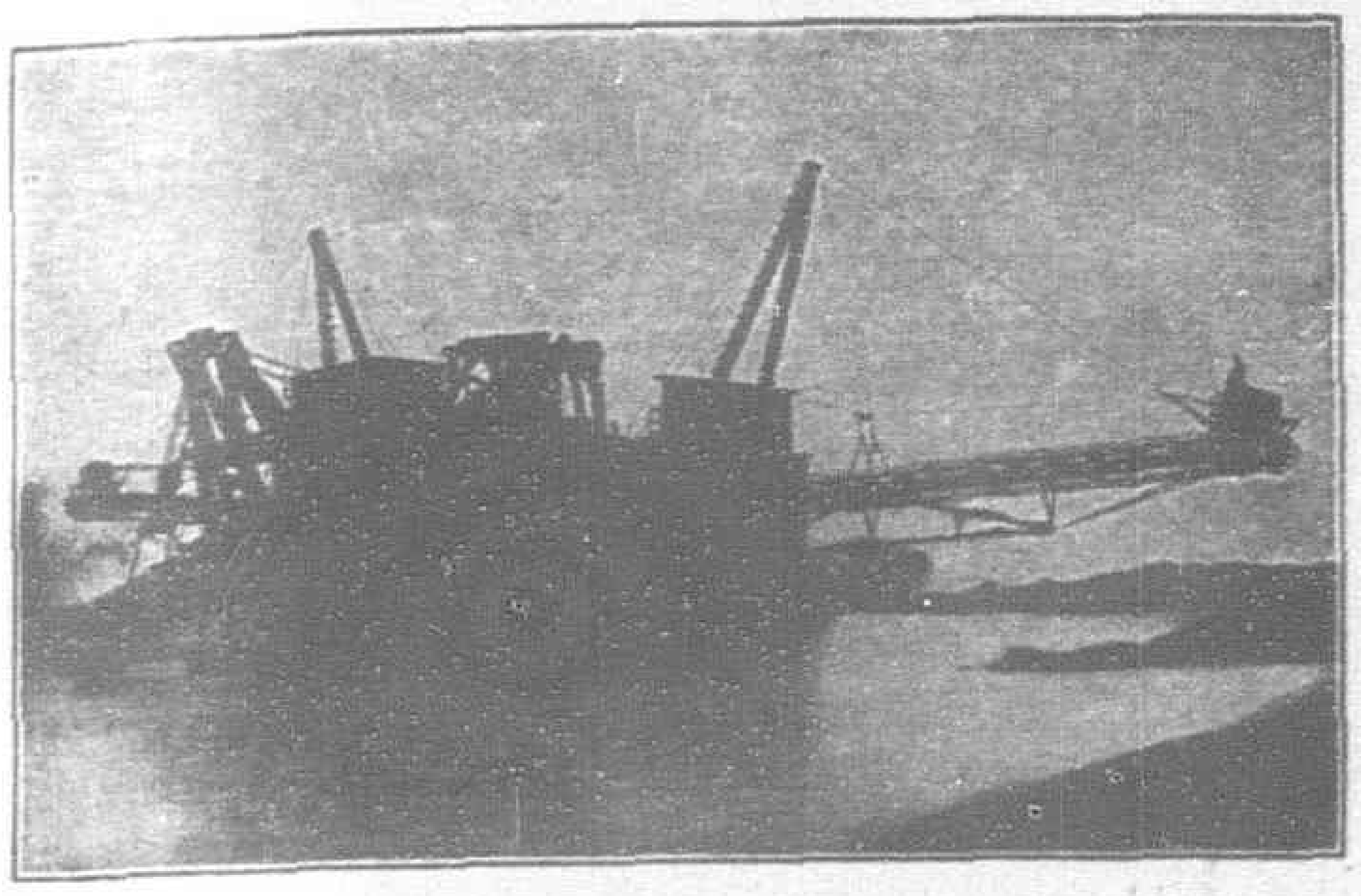


FIG. 9—DREDGE OPERATED BY 150 H. P. PRODUCER PLANT

Each engine is fitted with a hand-operated speed regulator, by means of which speed can be reduced when engine is running.

One cylinder of each engine is fitted with automatic compressed air starting gear. This can be thrown into or out of action by the movement of a single lever, and the engine is started automatically on compressed air.

PRODUCER PLANTS IN ACTUAL SERVICE.

A very unique Producer Installation is illustrated in Fig. 9, which shows a large dredge in use at the present time in the state of Iowa. A 150 horse power Fairbanks-Morse Producer Plant is installed on this dredge, some of the machinery of which is electrically operated, and the engine also furnishes power for electric lighting.

This plant operates twenty-four hours a day and is handled by two men, one for each twelve hour shift. While it has been subjected to the hardest kind of usage, yet this plant has been entirely satisfactory in every particular.

From report on 50 horse power plant used in operating marble works in Tennessee, statement is made that they use only eighteen ordinary hods of buckwheat anthracite per day of nine hours at a total cost of $1.39 for the coal. At this plant they poke the fire once in the morning before starting and once at night after shutting down. Outside of this the plant requires very little attention. The following is taken from letter written by the president of the company:

> "We are more than well pleased with the outfit, from the fact that it has proven entirely satisfactory, and in our minds is the cheapest power that can be installed. We take pleasure in recommending it to any and all manufacturers who are in the market for power, because of its durability and economy, with service unsurpassed."

At one 150 horse power installation in western Iowa, actual figures show that the cost of coal and oil is $105.90 per month. With their former Corliss Engine Steam Plant, and with somewhat smaller load, the cost of coal and oil amounted to $366.60 per month.

A most remarkable showing has been made at a point in Texas, where the City Electric Light and Water Works Plant is now being operated by a 150 horse power Fairbanks-Morse Producer Gas Engine using Texas lignite as fuel. In the words of the proprietor:

> "A careful figuring of the former fuel and labor conditions as compared with the present conditions, demonstrates that we are saving in operating expenses $900.00 per month."

A steam plant was formerly operated at this point, using crude oil as fuel. They were unable to burn enough lignite under the boilers to keep up steam and to do the required work.

One of the largest Suction Gas Producer Plants in the United States is illustrated in Fig. 10. This plant comprises six 150 horse power engines and one 200 horse power engine —1,100 horse power in all—complete with Suction Gas Producers, using anthracite as fuel. This plant is in Wisconsin and is operated twenty to twenty-four hours each day, excepting Sundays and holidays.

There was previously in use in these works a Corliss Steam Plant, run non-condensing, with water tube boilers using Illinois soft coal as fuel. While it is difficult to make accurate comparisons as regards fuel consumption, yet as a matter of general interest it may be stated that the steam plant required approximately three and two-thirds times as much coal per unit of power developed as the present Producer Gas Power Plant.

FUEL CONSUMPTION AND GENERAL COMMENTS.

The fuel consumption with Producer Plants depends upon a number of conditions, such as the quality and heat value of the coal used, the freedom from clinkers and excessive amount of ash, whether the engine is operating under nearly full load or under very light loads, and also whether the load is constant or rapidly fluctuating. Much also depends on the operator in charge of the plant. A careful and intelligent engineer will secure economical and reliable service. With a steam plant it is usually necessary to employ a licensed engineer, which has been found necessary owing to the danger involved in the careless handling of steam boilers. With the producer this danger is avoided and it is not necessary to employ a licensed engineer, although the best results can always be secured by employing an intelligent operator and one who will take a personal interest in the plant under his charge.

The fuel consumption usually varies from a pound to one and one-quarter pounds per brake horse power per hour at about full load, according to conditions and the quality of coal used. While economy tests with high grade fuels, and also short run tests, often show a lower consumption than stated, yet the figures submitted are conservative and give a fair idea of what may be expected.

A series of tests were recently made on a 150 H. P. Fairbanks-Morse Engine and Anthracite Producer for continuous runs of twenty-four hours, the object being to determine the comparative economy at different loads. The coal used was an ordinary grade of "buckwheat" Penn. anthracite. The fuel consumption per brake horse power hour at less than full load was found to increase per unit of power developed as follows:

¾ load—consumption 5.6% more per horse power hour than at full load.

½ load—consumption 21.5% more per horse power hour than at full load.

As the ordinary engine in use has a load factor of from 50 to 75%, the above figures indicate that the Producer Gas Engine is exceedingly economical, even under light loads.

The remarkable economy, together with the numerous other advantages mentioned briefly in the foregoing, have created a large and steadily growing demand for this form of power equipment. This fact and the surprisingly large number of installations already in successful operation on American coals indicate that a new industry has been created in this country.

Power users and engineers will welcome Suction Gas Producer Power as the logical solution of many of their power problems, especially in sections where local fuel costs are favorable. Indeed, when the actual merits of the subject are considered, it is not unreasonable to predict that the demand for Producer Gas Installations may soon exceed even the most optimistic hopes of the manufacturers.

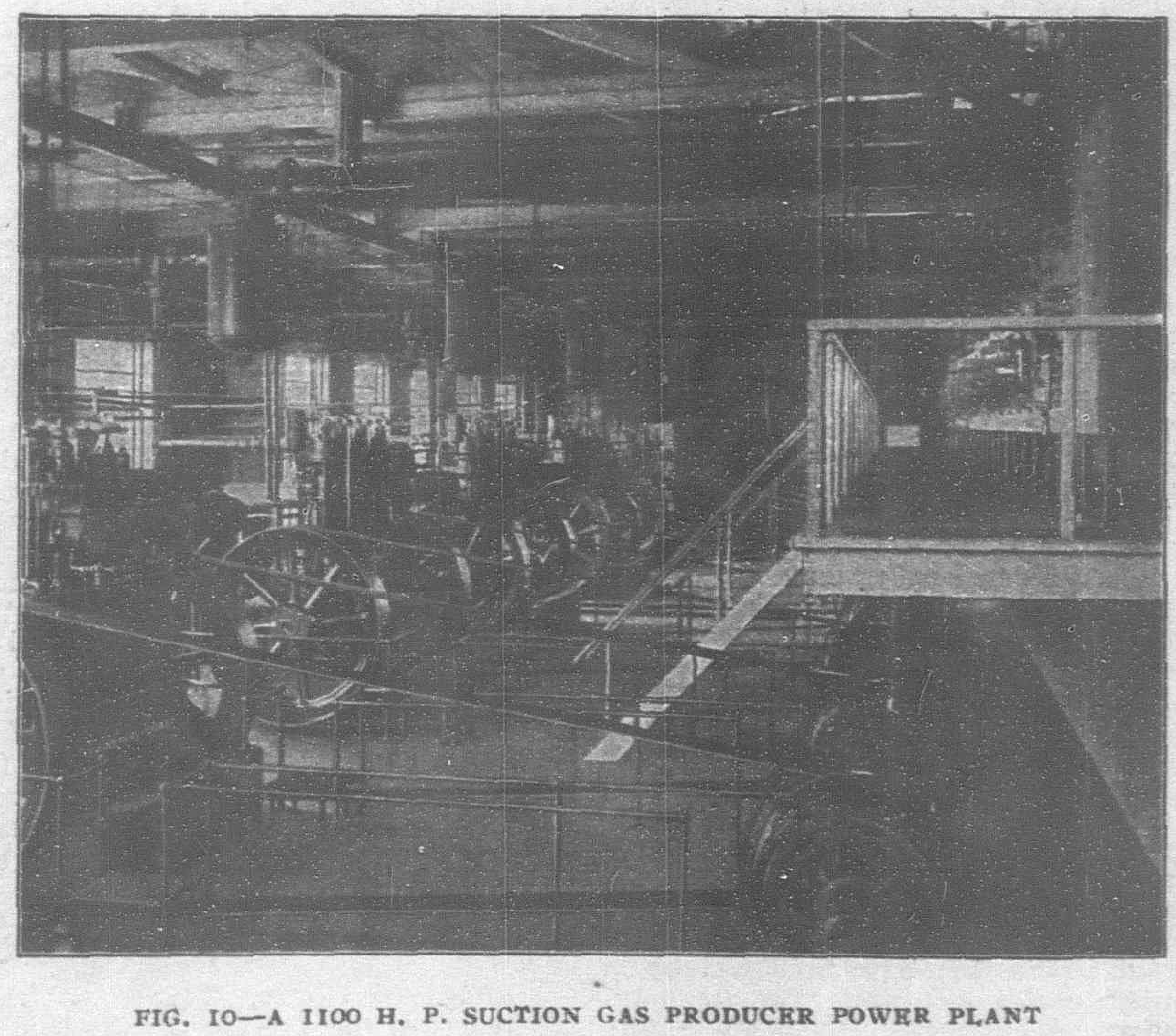


FIG. 10—A 1100 H. P. SUCTION GAS PRODUCER POWER PLANT

FAR EASTERN COMPANY REPORTS

British North Borneo Company.—The report of this company submitted at its 51st half-yearly meeting in London, July 28th, was most satisfactory to the shareholders and a dividend of 4% was declared. As Managing Director Cowie remarked:

"It will be remembered that not so very long ago our friends on the Stock Exchange advised their clients to buy our shares only as a good lockup for their grandchildren. Well, gentlemen, they will now be in a position to improve on that. In future they can say to them: 'Excellent lock-up for your grandchildren, with small but progressive dividends in the meantime for yourselves—last dividend 4 per cent.' The receipts for 1907 amounted to £145,816, comprising £141,268 in Borneo and £4,548 in London. The expenditure amounted to £79,721 in Borneo and £7,311 for home expenses. These figures show receipts exceeded expenditure by £58,783, out of which £5,875 has to be taken into account for depreciation, adjustment of exchange, etc. The assets of the company have increased in value by at least £7,000, which has been added to lands and property account. There has been a net expenditure on capital account of £35,312, including £12,178 proportion of salaries, etc., chargeable to capital. Revenue account shows a credit balance of £56,407, and added to the balance of land sales and revenue account from last balance-sheet, and deducting interest on debentures and bonds, writing off £12,061 for accumulated depreciation, etc., there remains a credit balance of £134,201, out of which the Court recommend the payment of a dividend at the rate of 4 per cent. per annum."

Balgowie Rubber Estates, Limited.—The report of this company for the year ending March 31st, submitted last month, shows a net profit for that period of $25,976.97, including the amount forward from last account. Out of this an interim dividend of 12.5% was paid last August absorbing $10,925. The recommendation of the directors to carry forward the balance was adopted.

The Hongkong and Whampoa Dock Co.—The ordinary half-yearly meeting of the shareholders of the Hongkong and Whampoa Dock Co., Ltd., was held at their offices in Queen's Buildings at noon on August 24.

Mr. H. P. White presided and there were present:—Hon. Mr. W. J. Gresson, Mr. C. Brodersen, Mr. G. Friesland, Mr. W. Helms, Sir C. Paul Chater, Kt., C.M.G., Mr. D. W. Craddock, Mr. Edgar G. Barrett, Mr. J. S. Van Buren, Directors; Mr. R. Mitchell, Actg. Chief Manager, Mr. T. I. Rose, Secretary, J. P. Braga, J. W. C. Bonnar, T. Skinner, Capt. W. E. Clarke, Chau Siu Ki, W. C. Jack, Lo Cheung Shiu, P. Nalin, E. Georg, L. Berindoague, H. Humphreys, and P. Durnerin.

The Secretary having read the notice convening the meeting the Chairman said: Gentlemen: The report and accounts having been in your hands for some time, I will, with your permission, take them as read. As a result of the working for the half year ending on 30th June last we have available for appropriation a sum of $705,270.19, out of which your Directors recommend that a dividend of 8%=$4 per share be paid, absorbing $200,000, that a further sum of $50,000 be placed to the credit of No. 1 Dock Extension Account, that $65,820 be written off the value of Kowloon Docks, $4,602.95 off the value of Cosmopolitan Dock, and that the balance of $384,847.24 be carried forward to a new account. It is hoped that this proposed distribution of profits will meet with your approval. The past half year's work, showing a net profit of $274,577.68, will not, I venture to think, be regarded as unsatisfactory in face of the extraordinary depression that existed, and I regret to say still exists in shipping the world over. This depression is brought forcibly to our notice by the number of vessels that have been laid up in this harbor during the past year for want of lucrative employment, and, you will readily understand, re-acts seriously on the business of a company such as ours. Further, in view of the fact that a certain proportion of the work executed during the period has been "New Work," the profits on which, as pointed out on a previous occasion, are necessarily small owing to keen competition, we may perhaps congratulate ourselves on the result now shown. The aggregate tonnage of vessels docked during the period under review is less than for some years past, there being a falling off under the heading of Merchant Shipping, and an increase under that of British and Foreign Men of War. Turning to the accounts, you will notice that the amount under the heading of Sundry Creditors shows a decrease of about $247,000 and the item Sundry Debtors is lower by $214,000 while the value of material on hand shows a reduction of $227,000. This is partly due to a revision in the system of ordering material, allowing the different establishments to draw on one another more freely and using up old stock. The Sub-Committee of Directors have concluded their investigations and have submitted their report to the full Board and it is reasonable to hope that beneficial results will accrue from their recommendations. You are doubtless aware that the recent disastrous typhoon has put a considerable amount of work into our hands—no very extensive repairs—but coming as it has done all at one time, the resources of our establishments and services of the staff are taxed to the utmost, particularly as a scarcity of labor is apparent. The tug and salvage boat "David Gillies" rendered yeoman services to shipping after the blow and the Company is to be congratulated in the acquisition of what will, I trust, prove a valuable asset. I am glad to be able to state that the Company's property suffered but little damage. Gentlemen: I do not know that I can add anything to what I have said, except to say that the prospects for the current half year, with the work we have already in hand, are favorable, and before moving the adoption of the report and accounts I shall be pleased to answer any questions that shareholders may wish to ask.

There being no questions, the Chairman proposed the adoption of the report and accounts as presented.

Mr. Bonnar, in seconding, said:—Mr. Chairman and Gentlemen: I have much pleasure in seconding the proposal that the Report and Accounts as presented, be adopted. During the period which these accounts cover business in every direction has been in a very dull and depressed condition, shipping being no exception. Advices from home are that a great many steamers are laid up for want of remunerative employment, and we know that in the East the same unsatisfactory state of affairs exists. Under these circumstances I think we ought to feel very thankful that our accounts show an increase in net profits of roughly $110,000 over the previous six months. I notice that $50,000 is being put to special account, No. 1 Dock Extension, and feel sure that this work when completed will bring in more grist to the mill. It is gratifying to learn that during the recent typhoon the Company suffered very little damage. I don't know whether we shall ever see the same prosperous years that the Company experienced in the past, some say we won't, but I for one am not without hope, and with a Board of Directors who have the Company's interest at heart, an energetic and willing staff, and up-to-date appliances, we can look forward with confidence to being able to take advantage of improvement in trade generally when it comes, and meet competition without fear. (Applause.)

The motion was carried unanimously.

The Chairman—That is all the business, gentlemen; thank you for your attendance. Dividend warrants will be ready to morrow on application.

Grand Hotel, Limited.—The following report of the directors for the half year ended June 30th, 1908, and recommendations made were adopted at the half yearly meeting held at Yokohama, July 30th:

The net profit for the half year after providing for general expenses, Directors' and Auditors' fees, Sundry Creditors, and bad or doubtful debts, amounts to *yen* 29,884.79, which it is proposed to apply as follows:—

In payment of a dividend of *yen* 4.00 per share for the half year	20,000.00
Set aside for necessary repairs of furniture	5,000.00
For depreciation	4,884.79

Perak Rubber Plantations, Limited.—The net profit for the year amounted to £695 against £1,014 the previous term and the report of the directors is pessimistic in tone. In concluding it says: "As rubber appears to cost the company 2s. 6d. per pound, the pious hope of the directors that the company will, in the coming year, join the ranks of dividend payers, seems unlikely to be realized. Much optimism is required in the face of labor difficulties, high capital, cost of estates and expensive production."

Tronoh Mines, Limited.—The report submitted at the first annual meeting held in London July 30th and covering the period including November 26th, 1906, and December 31st, 1907, show a debt to profit and loss of £4,396. The prospect for the future of the company appears bright.

Yokohama Specie Bank.—The directors of the Yokohama Specie Bank announce that owing to the failure of firms in Yokohama, Kobe and Tientsin some stringency was felt by the bank during the last half-year but that Manchurian and foreign business has counteracted the effect and a dividend of 12% as usual will be declared.

Hongkong, Canton and Macao Steamboat Co., Limited.—The following disposition of the net profits of this company were made at the meeting of the shareholders held August 11: dividend of $1.25 per share, $10,000 written off the book value of steamers, $3,600 written off wharves and properties, $12,500 transferred to Depreciation and Insurance Fund, $10,000 transferred to special repairs fund, balance of $17,755.84 carried forward to new account.

The Taku Tug and Lighter Co., Limited.—An interim dividend of one tael per share for the half-year ended June 30th was declared August 1st.

United Asbestos Oriental Agency, Limited.—At the twelfth annual meeting of this company at Hongkong the following report of the general managers was presented for the year ended May 31st:

The balance at the credit of Profit and Loss Account, after writing off $3,528.37 for depreciation and including $1,360.41 brought forward from last year, is $23,154.76 which it is proposed to appropriate as follows:—To place to Reserve Fund, $10,000.00; To pay a dividend of 15 per cent. on Ordinary Shares, $5,940.00; To General Managers' Remuneration, $2,000.00; To pay a further dividend of 5 per cent. on Ordinary Shares, $1,980.00; To pay $19.80 per share on 100 Founders' Shares $1,980,00; To carry forward to New Account, $1,254.76—$23,145.76.

Lahat Mines, Limited.—The report of the directors submitted at the first annual meeting of this company held in London, July 30th, would indicate that this company has arrived at the profit earning stage.

The balance sheet shows that the capital of £120,000 has been fully subscribed, and that the outstanding liabilities total £6,106.5.6d. The assets are represented by £102,235.16.10d on account of capital expenditure and £9,990.15.5 on account of development. Cash in hand and loans against security amounted to

£[illegible]1.0.7. The total receipts on account of sale of tin and other items amounted to £[illegible]2.0.7. There was a loss on the year's working of £4,396.18.2d.

New Gopeng, Limited.—The following is an excerpt from the report of the directors of this company covering the year ended April 30th, 1908:

The accounts show a profit of £7,366.15s., making, with the balance brought forward, £4,886 11s. 11d., a total of £12,253. 5s. 11d., out of which dividends at the rate of 23.¾ per cent. (4s. 9d. per share) have been paid, leaving a balance in hand of £2,753 5s. 11d.

Tekka Limited.—The first report of this company covering the period from the date of incorporation, January 21st, 1907, to January 31st, 1908, indicates progress in installation of plant at an outlay of £68,989 and revenue of £4,000 from leases of the 31-inch pipe. Since the annual report the hydraulic plant has been installed and operations to the extent of 15 tons for May and 14 tons for June, working only part of the time, are reported.

Vallambrosa Rubber Co., Limited.—The report for the year ended March 31st shows a net profit of £24,218 and with the balance forward from previous term after paying an interim dividend of 25% and deducting cost of machinery, etc., leaves £20,341 available. Out of this the directors recommend the distribution of a final dividend of 30% making in all 55% for the year.

The Bank of Japan.—The report submitted at the 52nd semi-annual meeting of this institution shows a net profit of yen 4,354,129.16, an increase over the previous term of Yen 400,000 and the reserve shows a credit of yen 2,325,000 or 80% of the capital of the bank. The following allotments were authorized:

	Yen.
Ordinary dividend at the rate of 6 per cent. per annum	900,000.00
Special dividend at the rate of 6 per cent. per annum	900,000.00
Reserve	1,000,000.00
Bonus and special allowances to directors, etc	219,000.00

The balance was carried forward to the next account.

The Toyo Industrial Bank.—The report submitted by the directors at the 13th semi-annual meeting shows that the net profits for the term were yen 867,860 out of which the following distribution was authorized:

	Yen.
Reserve to make losses good	104,000.00
Reserve for equalizing dividends	26,000.00
Ordinary dividend	406,250.00
Special dividend	243,750.00
Bonus to Directors	25,000.00

The balance, *yen* 62,860.43, was carried forward to next account.

Labu Rubber Co., Limited.—The report for the term including February 9th and December 31st, 1907, shows a profit of £2,931 which has been carried forward. The announcement is made that an interim dividend of 6% per annum will be declared during the present term.

Yokohama Engine and Iron Works.—The report submitted July 29th at the 21st annual meeting and recommendations adopted follow:

The net profit for the year (including the sum of Y12,477.04 brought forward from 31st May, 1907), after payment of a 2.50 a share Interim Dividend of Y19,500 in January last and providing for depreciation of buildings and machinery and payment of Directors' and Auditors' fees, amounts to Y73,921.19, which the Directors recommend should be appropriated as follows:

	Yen.
In payment of Final Dividend for the year of Y2.50 per share	19,500.00
To Transfer to Reserve Fund	25,000.00
Balance to be carried forward	29,421.19

Kirin Brewing Co.—At the regular meeting of the shareholders of this company last month the following statement was adopted and the recommendations approved:

	Yen.
Net profit	96,835
Brought from last account	15,502
Total	112,337
Legal reserve	5,000
To bonus	5,000
Dividend to shareholders (8 per cent. per annum)	100,000
Carried to next account	2,337

Dai Ishi Ginko (First Bank).—The following statement for the last half-year was adopted at the regular meeting last month and distribution authorized as follows:

	Yen.
Net profit	959,684
Brought from last term	447,957
Total	1,407,645
To reserve	300,000
To reserve for Korea branch	100,000
To bonus	47,980
Dividend on old shares (10 per cent. per annum)	250,000
Dividend to new shares (10 per cent. per annum)	170,000
Carried to next account	539,665

Bangkok Manufacturing Co., Limited.—The report for the half year ended June 30th was adopted at the regular meeting last month and the recommendation of the directors approved as follows:

The gross profit on the Company's operations for the six months amounted to Ticals 87,282.73 to which must be added Ticals 40,719.76 brought forward from last half-year giving a total of Ticals 128,002.49 available for distribution.

After allowing for Depreciation, etc., as per Profit and Loss Account absorbing Ticals 43,076.13 it is recommended to write off the item of Ticals 50,000 Goodwill, to pay a dividend of 4 per cent for the half-year amounting to Ticals 16,000.—, to carry Ticals 10,000 to Reserve and to carry forward Ticals 8,926.36 to next half year.

The Empire Hemp Co.—The second general meeting of this company was held last month and the following statement of the directors for the term and their recommendations were adopted:

	Yen.
Net profit	355,278
Brought from last term	2,560
Total	357,838
Legal reserve	18,000
Special reserve	30,000
Dividend to shareholders (12 per cent. per annum)	192,300
Dividend on new shares (12 per cent. per annum)	88,000
Bonus	25,000
Carried to next account	4,838

The Fifteenth Bank.—The following report of the directors with recommendations were presented at the regular meeting of the shareholders and adopted:

	Yen.
Net profit	2,557,878
Brought from last term	657,817
Total	3,215,695
To reserves	140,000
To bonus	50,000
Dividend (9 per cent. per annum)	810,000
Reserves for construction fund of the Nihonbashi branch	50,000
Reserves for loans uncollected	1,500,000
Carried forward	665,695

Namboku Oil Company.—The semi-annual meeting of this company held at the end of August resulted in the distribution of a 10% per annum dividend. At a recent extraordinary meeting it was decided to amalgamate with the Hoden Oil Company.

The Mitsui Bank.—The net profit for the half-year added to yen 853,923 brought forward from former account made yen 2,289,742 available for distribution out of which yen 500,000 was placed in the general reserve and yen 500,000 placed in a special reserve; 420,000 distributed among the partners as dividend and a balance of 869,742 carried forward. The bank reserve is now yen 11,500,000.

The Tokyo Gas Works, Limited.—The income during the term shows an increase of 20% over the previous six months but in consequence of large extensions and incidental expenses, a dividend of 13% was declared instead of the usual 15% dividend.

Fuji Gas Cotton Mill, Limited.—The following accounts were submitted by the directors at the regular half-yearly meeting last month and adopted and the recommendations approved:

	Yen.
Net profit	800,492
Brought from last term	588,562
Total	1,389,054
Legal reserve	40,024
Reserve against losses	40,024
Bonus to mechanics and sanitary educational and relief fund	40,024
Bonus to clerks and pension fund	40,024
Bonus to directors	40,024
Dividend to shareholders (18 per cent. per annum)	681,580
Carried to next account	507,354

The Shanghai Tug and Lighter Co., Limited.—An interim dividend of 3.5% on preference and ordinary shares has been authorized for the half year ended June 30th.

Bukit Rajah Rubber Company, Limited.—The profit for the year ended March 31st was £21,706 out of which a final dividend of 20% making 30% in all was paid and a balance of £1,696 carried forward.

Federated (Selangor) Rubber Co., Limited.—The net profit for the year was £2,237 out of which a dividend of 8% was paid and a balance of £592 carried forward.

Straits Settlements (Betam) Rubber Co., Limited.—Advices from London to the Malay Mail announce a dividend of 4%. The report for the previous year showed a net profit of £1,745 which was carried forward.

The Hokaido Colliery and Steamship Co.—The following statement of accounts and recommendations were submitted by the directors at the semi-annual meeting held last month and adopted:

Total Earnings		4,702,979
Total Expenses		3,209,107
Net Earnings		1,493,871
Deduct payments:—		
For Interest on Debentures	147,692	
For Mining Reserve	89,100	
For Reserve for Depreciation of Ships's Value	28,200	
For Reserve for Difference on Subscription of Debentures	18,000	
Total		282,992
Balance being final Net Profit		1,210,879
Net profit of present time	1,210,879	
Amount brought over from last account	604,915	
Total		1,815,794
To legal reserve	61,000	
To Dividend (rate of 14% per annum)	1,417,500	
3.50 yen per share of 1st, 2nd, 3rd and 4th issues		
0.875 per share of 5th issue		

To bonus	30,270	
Total		1,508,770
Amount to be carried forward to next account		307,024

Imperial Commercial Bank.—The loss of 580,000 yen was the history of the last six months of this bank and at the meeting held in Tokyo last month it was decided to strike out the 580,000 loss and enter a profit of yen 100,000 in the statement of account and in order to adjust matters a new account called an adjustment account was opened and the yen 680,000 entered on the debit side. The statement of account then stood:

	Yen.
The net profit of the term under review	100,389.15
Forwarded from the last account	16,126.84
Total (which is carried forward to the next account.)	116,515.99

Shantung Railway Co.—The net profits for the year 1907 were £145,000, an increase over previous account of £12,000 out of which a dividend of 4.75%, an increase of .5% was declared. With the completion of the Tientsin Pukao Railway it is believed that there will be a marked extension in the coal trade.

Grand Hotel des Wagons Lits, Limited, Peking.—This company has declared a dividend of 8.5% and carried forward Tls. 840 besides paying a small dividend on the founders' shares.

The Tanko Kaisha.—This company has paid a dividend of 14% for the term ended June 30th.

Tokyo Farmers' and Mechanics' Bank.—The following statement of accounts was approved and the recommendations adopted for the distribution of the net profits for the last six months:

	Yen
Gross receipt	104,380
Brought from last term	15,603
Total	119,983
Disbursement	59,615
Reserves against losses	10,000
Reserves for equalization of dividend	5,000
Reserves for the construction fund of new office	3,000
First dividend (5% per annum)	13,625
Bonus	1,600
Second dividend (5% per annum)	13,625
Carried to next account	13,518

Tokyo Woolen Factory, Limited.—The net profits for the half year were yen 43,275 including yen 3,152 brought forward and out of which a dividend of 8% per annum was paid and the balance of 2,275 carried forward,

Osaka Shosen Kaisha.—A dividend of 6% per annum was declared for the last half year. At the meeting the chairman announced that arrangements have been concluded with the Chicago, Milwaukee and St. Paul Railway for opening a new Pacific service.

Dai Nippon Brewery.—The semi-annual meeting of this company was held last month and the following statement of accounts was approved and the recommendations adopted:

Profit during the term	506,038
Brought from last term	357,392
Total	863,430
Legal reserves	30,000
Bonus	25,301
Dividend (15% per annum)	420,000
Carried forward	388,129

Oji Paper Mill Co.—At the semi-annual meeting held last month the following statement of accounts was approved and the recommendations for distribution adopted:

	Yen.
Net profit	116,117
Brought from last term	107,017
Total	223,134
Legal reserves	6,000
Special reserve	4,000
Dividend to shareholders (6 per cent. per annum)	108,000
Bonus	10,000
Carried forward	95,134

Nippon Railway Co.—At the general meeting of this company held last month a dividend of 12% per annum was declared.

Nippon Dai Ichi Brewery Co.—At the regular meeting held last month a dividend of 8% per annum was declared for the term.

Deutsch-Asiatische Bank.—The net profits for the year were Shanghai Tls. 960,943 (Tls. 869,624 for 1907), out of which Tls. 83,948 (Tls. 75,024) are applied to reserve purposes, while Tls. 32,609 (Tls. 26,087) are paid as directors' fees, and Tls. 675,000 as a dividend of m.225 (m.200). The staff fund receives Tls. 50,000, as in the previous year, and Tls. 119,387 (Tls. 118,513) are carried to new account.

Oriental Sugar Manufacturing Co. (Toyo Seito Kaisha).—The net profits of this company during the last half year amounted to yen 23,431 which was carried forward.

Kanegafuchi Spinning Co.—The report for the half year shows a net profit of -Y-1,026,876 including a surplus of -Y-750,402 brought over from the preceding period. Of this sum, -Y-628,340 was appropriated for a dividend at the rate of 16 per cent. per annum, -Y-100,000 was added to the reserves, -Y-50,000 paid as bonuses to officials, and -Y-748,536 carried forward.

The Bruseh Hydraulic Tin Mining Co., Limited.—Out of the net profit for the year $25,000 was placed in a special reserve, $60,000 absorbed in paying a 10% dividend and a balance of $3,843 carried forward.

Handelsvereeniging Amsterdam.—The report for the year 1907 is to hand, and shows that although in one department, that of the agricultural estates, there was a working loss owing to a failure of the coffee crop, the balance of profit amounts to ƒ795,842. The Managing Directors propose to issue a sixth series of shares to the extent of ƒ1,250,000. The dividend is the same as that for five years past, namely 10 per cent. The historical statistics of the Company's show that it began in 1879 with a capital of ƒ1,250,000, and made for the first year a profit of ƒ233,506. It has now a capital of ƒ6,250,000 and has made a total of net profits of ƒ1,486,169, carrying over for next year's account ƒ500,000. There is also a reserve of ƒ1,500,000.

Cicely Rubber Estates Company.—The net amount at the end of the year was £5,236 out of which a final dividend of 22.5% making 37.5% in all for the year on ordinary shares and 42.5% on preference shares.

Seventy-sixth Bank, Yokohama.—The net income for the first half of the year was yen 83,189 and an interim dividend of 8% per annum was declared.

Nippon Union Transportation Co., Yokohama.—The net profit for the half-year ended May 31st was yen 25,819,111 out of which an interim dividend was declared at the rate of 10% per annum.

The Hongkong & Shanghai Banking Corporation.—Minutes of the Ordinary Half-Yearly Meeting of the above-named Corporation held at the City Hall, Hongkong, at noon on 22nd August, 1908.—The Eighty-sixth Ordinary Half-Yearly General Meeting of the Shareholders of the Hongkong & Shanghai Banking Corporation was held on the 22nd instant, in the City Hall, when the eighty-sixth Report of the Court of Directors was submitted. Mr. E. Shellim (Chairman), presided, and there were present:—Hon. Mr. W. J. Gresson, Messrs. E. G. Barrett, C. G. R. Brodersen, G. Friesland, C. S. Gubbay, W. Helms, R. Shewan, Hon. Mr. H. A. W. Slade andMr. H. E. Tomkins (Directors), Mr. J. R. M. Smith (Chief Manager), Messrs. C. E. Anton, A. V. Apear, J. Barton, J. F. Cox-Edwards, Wm. Dunbar, J. K. Grant, E. H. Hinds, Ho Fook, Henry Humphreys, R. R. Hynd, A. C. Hynes, H. C. Joass, Ellis Kadoorie, Lau Pun Chiu, Lo Cheung Shiu, J. M. E. Machado, E. F. Mackay, H. N. Mody, C. Pemberton, J. C. Peter, W. Hutton Potts, E. H. Ray, C. A. da Roza, Dr. J. H. Sanders, Mr. H. Percy Smith, Hon. Mr. Murray Stewart, Messrs. F. H. Thomas, A. F. Warrack, Wong Leung Him and others.

The Chief Manager read the notice convening the meeting.

The Chairman having read the Report already published said:—Gentlemen, I need hardly say that it gives the Directors great pleasure to present the 86th Ordinary Half-Yearly report which I have just read. The Statement of Assets and Liabilities now before you exhibits an active and increasing business and the Profit and Loss Account shows that we have had a satisfactory half-year.

I think I may count, with confidence, upon your approval of the proposed distribution, viz:—

a dividend of £2 per share to be paid,
$5 lacs to be added to the Silver Reserve Fund,
$2½ lacs to be written off Bank Premises Account,
the balance of about $20 lacs to be carried forward to the next half-year, or practically the amount brought in from the previous one.

In inviting you to compare the Statement of Assets and Liabilities with that of the 31st December last I have the satisfaction of being able to point to a growth in the figures under nearly every heading. On the one side we see the large increase of $300 lacs in Current Accounts and Fixed Deposits, gold and silver together, and this addition to our operative funds is represented on the other side of the account by a like increase in the total of Bills Receivable, Bills Discounted, Loans and Credits, Cash and Bullion in hand and in transit. The total assets of the Bank now amount to the large sum of 333 millions of dollars.

The high price of money in Europe referred to at the last meeting by my predecessor in the Chair is now a thing of the past and it has been succeeded by a period of financial ease and an accumulation of funds awaiting employment; this is accounted for to some extent by less money being required to finance our trade owing to the fall that has taken place in the price of most products, but is mainly due to a shrinkage of trade throughout the world. It therefore suited the Bank, towards the end of the half-year under review, to hold our bills in London until maturity instead of re-discounting them, and you will observe that the amount of bills re-discounted outstanding is considerably less than the figures shown in previous reports. Outstanding exchange purchases at the end of last half-year were based on the then high rates for money ruling in Europe, and our accounts benefited accordingly by the heavy fall in the rate of home discounts. Money is also abundant in the chief business centres in China, more especially in Shanghai where the stock of sycee is abnormally large. In Japan the Japanese Banks have for some time past adopted a conservative policy with regard to their advances and money there continues to command high rates. Several of the large manufacturing companies in the country have however lately been able to borrow money in Europe and America, and this financial help to Japan's productive enterprises cannot fail to have beneficial effects not only on the trade but also on the general finances of the country.

India is still suffering from the effects of bad crops and low prices but nevertheless a considerable amount of Bar Silver was imported by the Bazaar during the half-year. These conditions brought about a very weak exchange market, and to prevent any heavy fall in rates the Indian Government decided to offer weekly for sale at 1|3 29|32 per Rupee their Sterling demand drafts on London. Latest advices record a favorable monsoon over the greater part of the country and I trust the result will soon be apparent in a renewal of prosperity.

For the first three months of this year the position of the Silk market was in a very unsatisfactory condition and at one time a panic in the trade was feared. This was happily averted. In America an improvement in the demand has taken place and in Europe the new season has commenced under favorable auspices; stocks have been considerably reduced but remain sufficiently large to keep prices down to a level that should encourage consumption. In spite of the severe crisis of last season the total of the combined exports from China and Japan shows that the trade is one which is still on the increase.

It is matter for regret that no indications are yet apparent that the Chinese Government are preparing to give effect to their expressed intention of reforming the national currency, and the confusion and disturbance to trade, caused by the excessive and uncontrolled coining of silver and copper subsidiary coins, continue. Further complications threaten to arise out of the issue of notes by various Chinese Banks throughout the Empire, but it is to be hoped that the Central Government will before long realize the necessity of taking steps to ensure that all such issues are supported by adequate and controlled reserves of uniform value.

As regards prospects in the Far East, it was unfortunate that just when a long continuance of trade depression, due to local causes, might have been expected to change for the better the financial crisis occurred in America. This affected the European money markets, causing a contraction of credit, and proved to be the forerunner of the prevailing restriction of trade all over the world. Though as yet there are no clear signs of the long deferred reaction, still cheap money and diminishing stocks are factors which must sooner or later bring about a commercial revival and I think we may therefore continue to take a hopeful view of the future. (Applause).

Before moving the adoption of the Report and Accounts as presented, I shall be pleased to answer, to the best of my ability, any questions you may put to the Chair.

No questions being asked the Chairman moved the adoption of the Report and Accounts.

Mr. C. E. Anton:—It gives me much pleasure to second the adoption of the Report and Accounts and in doing so I feel justified in saying that shareholders will have received with very great satisfaction the statement of the six months' working, the more so seeing that the period has been one of restricted trade in nearly all directions. The Directorate and Management have good cause to congratulate themselves on the result, and as pointed out by the Chairman it is very gratifying to notice the large increase in the figures under the various headings of the accounts presented. The general depression in the Far East has been very protracted and of a far-reaching character but, although the end of it is not yet in sight, I think that in the natural course of events we may confidently look forward to a return of better times—perhaps at no very distant date—in which we may rest assured the Bank will participate by increased prosperity. (Applause.) That competition in all classes of business in the East has become very severe cannot be gainsaid, and I take it that in banking there is no exception, and for that and other reasons it seems to me the policy pursued of continuing to add to the Bank's reserves is a wise and prudent measure. (Applause.)

The motion was carried unanimously.

Mr. Henry Humphreys proposed that the appointment of Mr. C. S. Gubbay, Mr. E. G. Barrett, Mr. C. G. R. Brodersen, the Hon. Mr. W. J. Gresson and Mr. W. Helms as Directors be confirmed.

Mr. W. Dunbar seconded and the motion was agreed to.

The Chairman:—That is all the business gentlemen; thank you for your attendance. Dividend warrants will be ready on Monday.

ESTIMATES FOR AMERICAN CONSULAR OFFICES IN CHINA, KOREA, AND JAPAN

(Continued from page 172)

The lot is 110.6 feet front, 214 feet deep. The value of the building on the lot is very small.

The contemplated buildings should include a residence and be of brick, with stone trimmings, two stories high, each story to have an 8 foot veranda all around. The area of the building would be 82 by 66 feet. The first floor should contain consul's office, 24 by 18 feet; general office, 24 by 22 feet; waiting room, 22 by 16 feet, which could also be used by the marine hospital surgeon; storage room, 18 by 16 feet, and drawing and dining rooms, each 24 by 18 feet. The second floor should have two bedrooms, each 22 by 24 feet; two bedrooms, each 24 by 18 feet; sitting rooms, 24 by 16 feet, and necessary bathrooms, closets, etc.

Servants' quarters, 72 by 18 feet, should be two stories high, 14 feet from the main building, and reached by a covered way.

The best brick can be purchased for $9 a thousand and seconds at $6 and $7.50 a thousand.

RECOMMENDATIONS

Purchase of ground, the lot mentioned by the consul, if possible	$25,000
Erection of buildings	30,000
Total	$55,000

The rented consulate here is very conveniently located and the quarters themselves convenient and comfortable, but are subject to the probability to which all rented consulates are liable—that of increased rent or of being compelled to vacate.

The British Government has just commenced the erection of a consultate here at a cost of $28,500 for the building, that Government having been previously the owner of the ground. It is to be a two story brick building, with stone trimmings, including a residence for the consul. The structure is to be 73 feet by 65 feet, exclusive of servants' quarters, they being 73 by 17 feet and two stories. The plan of the ground floor provides for a consul's office 22 by 17 feet; an office for the assistant, 14 by 17 feet; a waiting room, 14 by 16 feet; a storeroom, 13½ by 14 feet; two entrances, 8 feet in width, on the front and north; two rooms on the south, each 22 by 17 feet, to be used as drawing and dining rooms. The second floor is exclusively for residence purposes, there being a sitting room, four bedrooms, two dressing rooms, bathrooms, etc. The compound is 214 feet in depth by 110 feet in width, and faces the main thoroughfare on the east.

SEOUL.

Here the United States owns the ground and buildings, and the Consul General says that the present consular buildings and office are extremely commodious and attractive. The grounds are spacious and in excellent condition. The main office building is separate, and is a very roomy, good building, with a large fireproof stone vault attached. The only criticism is in respect to the sanitary condition of the living rooms in the consular building, which are built so low and close to the ground as to be damp and unhealthful. They are in such poor repair that they should be torn down and a new building erected at a cost of $10,000.

RECOMMENDATIONS.

Erection of new residence building	$10,000

TAMSUI.

The present location of the rented consulate is not suitable. It is in the Chinese city of Daitohe, but should be situated in the Japanese section, which has been reconstructed on modern lines since the Japanese occupation. The Chinese city, Daitohe, has consequently become but a suburb of the Japanese capital Taipeh. The Japanese are doing their best to make Taipeh a model city, having already provided it with broad, well paved streets, splendid drains, beautiful parks and modern well constructed administration buildings. The Chinese huddle together in Daitohe much as Chinese do in any Chinese city, and landlords find it a better investment to rent to Chinese than to foreigners, for the latter require more floor space and are reluctant to pay the price paid by Chinese for similar space.

The consul reports having secured an option from the Japanese Government on a site which is considered the most desirable in the city. It is located in the best portion of the city, 100 yards from the residence of the Governor General, surrounded by public buildings and military parade grounds, thus insuring the most desirable surroundings. It is part of the ground set apart by the insular authorities for a public square and park, and the amount allotted by the Japanese, 1.7 acres, will be sold to the United States only upon the condition that the buildings erected thereon shall conform to their general plans for the beautification of the city; otherwise they prefer to convert the whole into a park. This piece can be bought for $3,000, which includes all expenses incurred in filling it up to a level with the roads. The laying out and planting of a garden would involve an expenditure of $500 more.

The consul estimates the cost of a building at $20,300. It is designed to withstand the severe typhoons prevalent during each autumn, as well as to withstand the unsanitary conditions arising during the rainy season. It is designed to serve the greatest possible comfort during the long hot summer, and it has been planned as a private residence as well as for consular purposes.

The population of the island is 3,000,000; its area is 15,000 square miles. Practically the entire crop of tea goes to America.

RECOMMENDATIONS.

Purchase of ground	$3,000
Erection of buildings	20,300
Walls about grounds	2,000
Paths, wells and incidentals	2,000
Total	$27,300

YOKOHAMA

The United States owns ground in Yokohama, now occupied by the consulate, 99 by 225 feet, deeded by the Japanese Government with the proviso that the United States use it for a consulate. The Consul General says it is in a very desirable location. The buildings, however, are owned by private parties, and can be purchased for $4,493.

Consul General Miller recommends that a new building be erected, constructed of stone, two stories in height, earthquake proof, with iron shutters, metal ceilings and steel roof, and basement for servants' quarters, heating plant, etc., at a cost of $75,000. Eight rooms are required on the ground floor, viz., one for post office and waiting room, 20 by 20 feet; one for stenographer, 14 by 20 feet; one for shipping office, 42 by 20 feet; one for vault, 12 by 18 feet; one for Vice Consul General, 12 by 18 feet; one for seamen's room, 12 by 28 feet, and a hall, 12 by 70 feet. Eight rooms are required on the second floor, viz., two for navy paymaster, 16 by 20 and 18 by 20 feet; one for inspector general 16 by 20 feet; one for statistical library and meeting room for American Asiatic Association, 20 by 42 feet; two for Treasury agent, 21 by 21 and 21 by 16 and two for Marine Hospital Service, 12 by 16 and 21 by 21 feet, with a hall 12 by 50 feet. Sketch of the floor plans of the two stories was enclosed by the Consul General.

He also recommends that a consular residence be erected on this ground, at a cost of $25,000, but encloses no plans.

RECOMMENDATIONS

Purchase of old buildings now on the ground	$4,493
Erection of office building	75,000
Erection of residence	25,000
Total	$104,493

The sketches and photographs which were contained in House Document No. 510, Fifty-ninth Congress, second session, have not been included in the present letter.

I have the honor to be, sir, your obedient servant,

ELIHU ROOT.

The Secretary of the Treasury.

FAR EASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

ELECTRIC RAILWAYS, LIGHT, POWER, TELEGRAPHS, TELEPHONES, AIRSHIPS, ETC.

Waipora Generating Plant.—This important hydro-electric plant in New Zealand suffered severely from floods which practically destroyed the flume that carried the water to the plant. The damage is estimated at about $90,000.

Paklat Tramway.—A small tramway about one mile and one-fifth in length has been completed by the Menam Motor Boat Company to connect its service with the Siam Electric Co.'s Service. The line runs about three miles south of Bangkok.

Oshima Hydro-Electric Company.—The generating plant of this company has been put in operation and now the city of Hakodate is being supplied with light and power generated from the power plant at Onuma. This company has placed a loan of 400,000 yen with banks in Tokyo.

Bangkok Dock Co.'s Enterprise.—The *Siam Observer* announces the construction by the Bangkok Dock Co. of the first dynamo turned out by any manufacturing plant in Central Asia and bodes well for engineering enterprise for Siam. This dynamo is driven by a gas engine.

Fuji Electric Tramway.—Dr. Saburi, representing Tokyo capitalists, has been investigating the electrical invasion of the Alps with excursion trains, has reported that similar methods of transportation may be successfully inaugurated to climb the famous Fujiyama and the project will soon be under way.

Telephone Service for Fujiyama.—A telephone service is being installed and many stations established along the ascent to the mountain. According to the *Chamber of Commerce Journal* it is proposed to instal an electric lighting system as well and provide for artistic illumination of the mountain top at night.

Penang Electric Supply Extension.—At a recent meeting of the municipal commission a loan of $100,000 was authorized for the duplicating of the plant so as to be prepared for emergencies, to extend the system and to replace defective cables. This action was based on the report of Acting Electrical Engineer Haslam.

Kosichang Cable.—Alterations in the original survey for the laying of the cable has caused delay but this will soon be overcome with the arrival at Bangkok of the manager of the Eastern Extension Telegraph Co. who has the matter in charge. The linking of Kohsichang with Bangkok, says the *Bangkok Times*, will prove of great value alike to the government and the shipping community.

Adelaide Tramways.—The construction of the system under way has been greatly delayed by the slowness with which the necessary materials are being delivered. The agreement with the government provided that the system would be completed and ready for operation by the first of November but there is every reason to believe that the lines will not be ready for traffic by the end of the year.

Electric Plant for Zamboanga.—A stock company has been organized with a capital of 50,000 pesos fully subscribed for the purpose of installing an electric plant to supply light and power to the city. The company will also undertake to supply the city with water. The officers of the company are as follows: P. J. Moore, president; D. G. Beebe, vice-president; John Spirig, treasurer; Bernardo Macrohon, secretary.

Chinese Telegraphs.—A compromise has been effected between the shareholders of the Imperial Chinese Telegraph Administration at Shanghai and the Ministry of Posts and Communications, the former having agreed to accept $180 each for their shares instead of $170 as originally offered. As a result of the negotiations there is prospect of an early control of the telegraphs of the empire by the government and the installation of the extensive lines contemplated to make the system most effective.

Albay and Camarines Telegraph and Telephone Franchise.—The Philippine Government has granted a franchise to Charles W. Carson to install a system of communication in the provinces referred to. Another and similar franchise has been proposed for the island of Panay. These systems include the right to install systems not only in any of the municipalities but connecting them as well. This system will, when completed, provide long distance telephone connection throughout the principal provinces and ultimately place all municipalities in communication with the insular capital.

Keihin Electric Railway.—This company has concluded a British loan for 2,000,000 yen to be utilized in constructing an extension between Shinagawa and Aoyama, a distance of over four miles, together with a two mile coast line connecting Kamata and Haneda and the doubling of the Kamata-Haneda line for a distance of about two miles. The company is also considering the advisability of double-decking the cars so as to increase the carrying capacity of the system. The present capacity is 50,000 a day and it is believed that the traffic may be doubled by the innovation. In addition to the electric trams it is the purpose of the company to supply light and power to the different localities along the Shinagawa and Kanagawa line.

Singapore Electric Tramways.—The *Singapore Free Press* takes occasion to explain an advertisement in the Government Gazette referring to the liquidation of the Singapore Tramways Limited and says:

"A notice appears in the last issue of the Government Gazette, advertising the liquidation of the Singapore Tramways Limited, which might be misleading without a line of explanation.

"The liquidating Company must not be mistaken for the Singapore *Electric* Tramways Limited which is the Company that now owns and operates the Tramways of Singapore.

"The present Company purchased its rights and undertaking from the Singapore Tramways Limited, and hence the liquidation now of the latter as a formality."

Sydney Tramways.—The new turbine generator for the Ultimo power house at Sydney will not be installed until September next owing to delays in England occasioned by the engineers' strike. As a result, says the *Australian Hardware Journal*, it is impossible to supply any additional current, and all the new tram lines will have to wait. Continuing, that journal says:

"Few have any adequate idea of the enormous extension of tramways around the city during the past half-year, and still going on in all directions. Some important extensions are being made in the vicinity of the garbage destructor at Moore Park. A new car shed and handsome offices have been erected, costing close on £30,000, which have vastly improved that locality, and but for the unsightly tip and the destructor would become a desirable place for residences."

Japanese Wireless Telegraph Tolls.—The Japanese department of communications has issued the following schedule of tolls for wireless service:

Coast fee—
For messages to be received in or despatched from Japan, through coast offices:
60 *sen*, not exceeding five words.
12 *sen* per additional word.
For other messages:
24 *sen* per word.
Fee on board—
16 *sen* per word.

In addition to the aforesaid coast and vessel fees ordinary telegraph fees must be paid at the following rate:—

For messages to be received in or dispatched from the main land:
25 *sen*, not exceeding five words.
5 *sen* per additional word.
For messages to be received in or dispatched from Formosa, Shanghai and the Bonin Islands:
Official messages—
25 *sen*, not exceeding five words.
5 *sen* per additional word.
Private messages—
50 *sen*, not exceeding five words.
10 *sen* per additional word.

RAILWAYS AND RAILWAY SUPPLIES

Nanking City Railway.—This line was opened to traffic the last week in August.

Shantung Railway.—The total revenue for the term ended June 30th is announced to be $1,200,000.

Yokohama Railway.—The extension between Kanagawa and Hachioji was opened the last of August.

Peking and Mukden Traffic.—Railway traffic between these two points was opened on September first.

Manila Railway Co.—The new line from Manila to Batangas was opened to traffic last month as far as Biñan.

Formosan Railway Hotel.—The railway hotel at Taikohu is about completed and will prove a boon to that section.

Mukden Railway Depot.—The new building constructed by the Imperial Railways of North China was opened last month.

Peking-Kalgan Construction.—The recent floods destroyed much of the track near Nankou but this has been promptly repaired.

Tehchow Arsenal Branch.—The officials of this institution have petitioned for a branch to connect the works with the Tientsin-Pukow.

Kiachow-Tsinanfu Railway.—The German government has agreed to sell back the railway to the Chinese government for Tls. 15,000,000.

Railway Bridges for Tientsin-Pukow.—Eight large bridges have been ordered for the northern section from the Hanyang Iron and Steel Works.

Indian Railways.—The total mileage of railways under operation in India March 31st, 1908, was 30,286 with 2,457 miles undergoing construction.

Tokaido Railway.—The doubling of this line is being expedited by the Railway Department and the new station at Ashiya was opened September 1st.

Canton-Hankow.—Advices from Yingtak state that in view of the effect of the recent floods, it has been decided to change the road bed in a few instances.

Bridge Work on the Tientsin-Pukow Railway.—The Yangtze Engine Works have the contract for the construction of the bridges on the Northern Division.

The Boso Railway.—The purchase price of this line has been fixed at 2,156,000 yen and the Japanese Government will confer on the company 960,000 in bonds.

Antung-Mukden Railway.—Liaoyang may not have the benefit of this line if changes proposed in the route are confirmed. Kwantienshien may be substituted.

Japanese Enterprise in Manchuria.—The profit from the railway section south of Harbin controlled and operated by the Japanese has exceeded yen 4,000,000 per annum.

Sungei Ujong Railway Co. Transfer.—The property operated by this company passed into the hands of the Federated State Railways August 1st. The old staff, generally, was retained.

Northern Manchurian Railway.—The Peking government has sanctioned the construction of line connecting Tsitsihar and Aigun, a distance of 240 miles, to be completed in four years.

Trans-Formosan Railway.—The ceremony in connection with the opening of this line will be held in October at Taichu and will be presided over by a prince of the Imperial family of Japan.

Peking-Hankow Railway.—The result of the disastrous floods along this line has been repaired and traffic resumed August 20th between Peking and Hankow where the damage was greatest.

Yellow River Railway Bridge.—It has been decided to span the river along the line of the Tientsin-Pukow Railway with a steel structure at Lokow, opposite Chinanfu, the capital of Shantung.

Hsinmintun Fengtien Railway.—The redemption of this line by the government has been recommended to the throne by the board of Posts and Communications at Peking. The price named is Tls. 3,400,000.

Tientsin Branch Station.—The site for a branch station to be erected in Tientsin in connection with the Tientsin-Pukow Railway for the convenience of the commercial community is now the subject of discussion.

Amoy-Chiang Chu Railway.—With the completion of this line it is anticipated that every effort will be made to extend it so as to connect with the Peking Hankow where connections would be made between Amoy and Paris.

Changchun-Kirin Railway.—An effort is being made by the influential Chinese capitalists of Kirin to secure control of this line and at a recent meeting of those interested the sum of Tls. 2,000,000 was subscribed for this purpose.

Dai Nippon Kido Kaisha.—This company was recently launched with a capital of yen 2,335,000 an amalgamation of the eight light railways in Fukushima, Atami, Shizuoka, Ise, Kumamoto, Hamamatsu, Hiroshima and Yamaguchi.

Indian Railway Conference Association.—This association convened at Simla September 21st for the purpose of discussing among other things the municipal taxation of railways, electric lighting for trains and question of tariff simplification.

Steel Rails for Australia.—The relaying of the lines controlled and operated by the New South Wales Government is going on apace. A recent shipment received comprising 12,273 steel rails and a large quantity of fishplates is for this purpose.

Military Railway Branches.—The Peking government is considering the advisability of constructing branches from the different main lines throughout the empire so as to make connections with the different naval stations and military depots for strategic purposes.

Canton-Hankow Railway.—The construction work from Wuchang for 148 miles will be under the supervision of Engineer G. Moore who is also Engineer-in-Chief of the Hankow Waterworks. The first sod will be turned in October and there is every prospect of rapid progress.

Kowloon-Canton Railway.—The desire of the Peking government to appoint an advisor to the British Syndicate in charge of this section is not welcomed by the British company and the president of the Board of Posts and Communications has filed a protest through the Chinese minister to London.

Russo-Japanese Railway Conference.—This conference will be convened at St. Petersburg in October for the purpose of discussing the establishment of a junction between the South Manchurian and the Chinese Eastern Railway and, in addition, junctions and working agreements with Chinese lines.

Tunneling in Siam.—The Royal Railway Department of Siam has undertaken to run tunnels through the watershed between Menam Yom and Menam Yai. One tunnel at Kao Pung when completed will be 400 meters in length and the other 100 meters. The work is progressing favorably, says the *Bangkok Times*.

Canton-Macao Railway.—The Chinese Director, who made a contract with the Portuguese company for the construction of this line, has petitioned Peking to cancel the contract for the reason that the company has needlessly delayed construction. He also urges that the government should press the construction of this important line with all vigor.

Central Western Railway Extension.—The new line connecting Nakatsu and Sakashita, a distance of six miles, was opened on August 1st. This line passes through difficult country and the construction of a steel bridge over the Kiso River, a very turbulent stream, is evidence of unusual engineering enterprise. This line taps a district rich in granite deposits.

Canton-Hankow Loan.—Director General Chang Chih-Tung of the proposed Canton-Hankow trunk line is opening negotiations for a loan of Tls. 50,000,000 necessary for the construction of this line through Hunan and Hupeh. The funds for the line in Southern and Central China will be provided by a British loan. The Cantonese are expected to defray the expenses of a part of the line in Hunan.

New Australian Railways.—The announcement is made that the construction of the South Grafton to Coff's Harbor section of the North Coast Railway in New South Wales would commence about the first of the year, and that an additional extension will be made from Coff's Harbor to Dorrigo. To relieve the congestion of traffic on the Western Suburban line it is proposed to extend the line from Belmore to Liverpool.

Yunnan Railway.—Advices from Yunnan announce the collapse of the concessionaire company after completing the construction of 92 kilometers of line and expending 10,000,000 francs. The suspension of the work is blamed on the unsettled condition of the country which made it impossible to secure the necessary labor. The first 71 kilometers of the Laokai Yunnanfu was taken over from the construction company recently.

Tai-Tsao Railway.—The construction of the projected line of railway to connect the coal mines near Yihsien with Tiehchwang in South Shantung will add great impetus to the colliery industry in the section affected. The mine owners propose making modern installations and improvements that will greatly expedite the work at the mines and reduce the cost of production to the minimum, once transportation facilities are afforded.

Hanchow-Kashing Railway.—A trial run was made on the Linping-Siashih section of the Northern end of this line about the middle of August and the line between Siashih and Kashing will be completed as soon as the bridge, now under construction, is finished. It was expected that by the middle of this month trains would be running into Kashing. The construction between Kashing and Kashan was commenced this month.

Pakhoi-Nanning Railway.—The survey of a line connecting Pakhoi in Kuangtung to Nanning situated in Kuangsi has been ordered by the department of Posts and Communications and the viceroy of Canton has the matter under his charge. This is the line proposed and abandoned last year but now found necessary for the transportation of troops and military supplies in connection with the uprisings that feature those Southern provinces.

Burmo-Chinese Railway.—The Indian Railway Board is considering the construction of a railway to connect Bhamo and Talifu by way of Tengyueh, a distance of 385 miles. This would place Western China in direct communication with India and the traffic, which is now carried during the more favorable seasons by pack-trains, indicates that the project would prove a satisfactory investment. This line would cost about £5,000,000.

Tientsin-Pukow Construction.—The German or Northern division of this line is to be divided into four sections for the purpose of expediting the construction, as follows: Tientsin to Liangwongchuang; Liangwongchuang to Sungchiatun; Shungchiatun to Tungkuangshien and Tungkuangshien to Tungpinghsien. The director general of the entire railway is the Hon. Lu Hai-huan and managing director of the British section is Taotai K. S. Low.

American Enterprise in Siberia.—Professor Oseroff who occupies the chair of Political Economy in the Moscow University is quoted by the Russian Press. "The granting of concessions to the financiers of America must be made under the one condition, that all the work must be carried out with Russian labor and Russian material. I would like to see concessions given to Americans so that the American spirit of energy and work may take the lead and become a blessing to the people of Siberia."

Rangoon Railway Station.—The plans for the extension of the Rangoon railway station are complete and the work on the remodelling of the yard is underway. The increased facilities necessary for the handling of traffic at this point has been apparent for some time, The additions of the traffic from the lines in the Irrawaddy Delta and the line to Mandalay which Rangoon now handles in addition to the original Rangoon-Prome line, have caused serious congestion and inconvenience which the remodelling will eliminate. The cost will not exceed twenty lakhs of rupees.

Locomotives for Peking-Kalgan Line.—The North British Locomotive Company, Limited, of Glasgow has shipped three heavy articulated compound engines for this rallway. They are equipped with the Westinghouse automatic brake and are designed for use on heavy grades. They are described as follows:

Gauge, 4 ft. 8½ in.; diameter of high pressure cylinders, 18 in.; diameter of low-pressure cylinders, 28¾ in.; stroke of pistons, 28 in.; diameter of coupled wheels, 4 ft. 3 in.; rigid wheel base, 9 ft. 8 in.; total wheel base 29 ft. 4 in.; height of boiler centre, 10 ft.; heating surface total 2,591 square feet; grate area, 45.1 square feet; working pressure, 200 lbs. per square in.; weight in working order, 96.

South Australian Railways.—Tenders will be opened on October 21 for the following railway material delivered on the dock at Port Adelaide—72 best mild steel boiler plates, 16 best mild steel smokebox tube plates, 5 copper tube plates (flanged), 16 copper wrapping plates 5 best steel crank axles, 50 carriage rugs, 12 cast steel tramcar wheels, 317 engine and tender tires, 302 bars channel steel, 245 bars angle steel, 603 mild steel plates, 10 bars square root angle steel, 580 spiral springs, 15 bars best mild steel angles, 600 mild steel sheets for panel plates. Specifications may be seen and forms of tender obtained at the Supply and Tender Board Office, and the Office of the Chief Mechanical Engineer, Islington; specifications may also be seen at the Office of the Agent-General for South Australia in London.

PUBLIC WORKS, DOCKS, WHARVES, ETC.

Canton Waterworks.—The construction of the extensive system of water supply for Canton is now under way. The first sod was turned on August 16th.

China's Southern Naval Base.—With the approval of Peking the Island of Nantien will be made the naval base and large docks will be constructed at an early date.

Taihoku Waterworks.—The development of a water supply system has cost the city over one million dollars during the past three years and is now nearing completion.

Fatshan Waterworks.—The petition of Mr. Pan Yuen Ho for a concession to install a water supply system at Fatshan has been granted by the viceroy. He will also install an electric light plant.

Peking Waterworks Construction.—The work on this system is now under way. The contractors have divided the construction into two sections and both are being developed simultaneously.

Yokohama Waterworks.—The extension of the water supply at an outlay of 7,000,000 yen, the construction of which will take 10 years has been decided upon and the financial features are now being arranged.

Foochow Dockyards.—A new site is proposed for these docks and new buildings with the most modern equipment will be installed. The central government has authorized the dispatch of a delegation to foreign countries to investigate methods and equipment.

Hoangho Conservancy.—During the last year over Tls. 150,000 have been spent in the maintenance of the dyke repairs and in constructing new dykes, says the *Peking and Tientsin Times*. The new dykes comprise a distance of 12,000 feet in length on either side of the river between Tsiyang and Putahsien.

New Zealand Public Works.—The government has authorized a loan of £1,250,000 to be expended together with £1,100,000 from other sources as follows:

Railways, £1,000,000; additions to open lines, £350,000; roads and bridges, £650,000; public buildings and telegraph and telephone extensions, £350,000.

Chikugo Irrigation.—The Fukuoka-ken authorities are considering a scheme for the irrigation of the rice lands in Chikugo. The scheme includes the construction of a canal 35 miles in length and the utilization of the waters of the Chikugo River. This equipment will, it is believed, provide sufficient water to irrigate 33,000 acres.

Benguet Road Bridges.—The Atlantic Gulf and Pacific Co. of Manila has secured the contract for the construction of three reinforced concrete bridges and five steel spans on the Benguet Road to replace the temporary suspension structures. The concrete arch structures will have 70, 75 and 23 meters respectively and the largest steel span will be 79 meters.

Onohama Reclamation Scheme.—The Mitsui Company proposes to expend the sum of 10,000,000 yen in reclamation at Onohama for the purpose of extending its warehouse accommodation in connection with the increased harbor facilities at Kobe and the prospect for increased business. Some delay has been experienced in securing permission of the Kobe authorities.

Keelung Harbor Works.—The progress of the harbor improvement works at this Formosan port has been marked, and by the end of the year the quays in the vicinity of the railway station will accommodate vessels of medium tonnage to anchor alongside. These quays will be 1,500 feet in length and there will be an uniform depth of 30 feet alongside when complete.

Siberian Waterways and Improvements.—A project which has for its purpose the construction of large canals for the purpose of connecting the rivers Tobol, Ob, Ishim, Irlish, and Yeniessi, has been authorized by the Russian government and a survey is now under way. This system of canals and natural waterways will approximately parallel the Trans-Siberian Railway.

Water Supply for Rubber Estates.—The necessity of pure water for the rubber estates of Malaya is engaging the attention of the leading rubber companies. The *Singapore Free Press* announces that the Chenderiang and Sungei Yong Rubber companies have arranged to tap the Chenderiang and Tapah water mains for the purpose of supplying pure water to their estates.

Yokohama Bund Reclamation.—The city assembly recently appropriated the sum of yen 27,650 for the purpose of reclaiming a portion of the foreshore in order to widen the road between the French Hatoba and the Grand Hotel. The reclamation of this strip will be 11 yards wide by 266 feet in length. This work is an extension of the plans of the electric railway company along the foreshore to Sugita.

Hankow Public Improvements.—The construction of municipal buildings in the Russian, German, and British concessions is an indication of the general activity in the building line that characterized recent history in this city. The different concessions are well lighted with electric light and with the transfer of the old British Municipal building to the customs makes the latter more available to the commercial community.

Liao River Improvements.—The merchants o Newchwang are agitating the improvement of the river so that it may be kept open for the junk carrying trade. It is advanced that the facilities offered by the river for the transportation of supplies and Manchurian products cannot be equalled by any railway that may be built from Tiehling to the sea. A free and open channel from Tiehling would mean much to the development of the resources of Manchuria.

Honolulu Harbor Works.—The construction of an entrance channel to the harbor 35 feet deep and 400 feet deep and easing of a curve which menaces shipping is well advanced. The dredging of the harbor proper will provide shelter of an uniform depth of 35 feet and width of 1,200 feet at mean low water. The plans for the naval station at Pearl Harbor, eight miles west, provides for a waterway 37 feet in depth and at no point in which there shall be a curve of less than 2,000 feet radius.

Mongkoktsui Typhoon Shelter.—The legislative council of Hongkong has authorized the expenditure of $1,500,000 for the construction of a large harbor of refuge and to meet a portion of the cost the following increase of harbor dues was authorized:

(1) For all river steamers, which enter the waters of the Colony by day or by night:—

Five-sixths of a cent per ton register.

(2) All other ships which enter the waters of the Colony:—

Two cents per ton register.

Exemptions.—British and foreign ships of war.

Moro Province Improvements.—The sum of ₱94,050 has been authorized expended for buildings at Mindanao as follows:

District building, District of Lanao, fifteen thousand pesos; district building, Cotabato, twelve thousand pesos; custom house and bodega at Davao, three thousand five hundred pesos; pump-house at provincial building, one thousand pesos; district jail at Jolo, ten thousand pesos; garage at Zamboanga two hundred and fifty pesos; headquarters, sub-district of Basilan, five thousand pesos; Moro Exchange buildings, twelve thousand five hundred pesos; buildings at Calarian, three thousand three hundred pesos; school buildings, thirty-one thousand five hundred pesos.

For bridges and roads the sum of ₱65,100 will be expended.

SHIPBUILDING, GENERAL MARINE AND FISHERIES

Gunboats for the Amur.—The shipyard at Storetinsk on the Amur has been given the contract for the construction of three vessels which will be used for patrolling purposes.

To Supply Battleships.—Messrs. Arnhold, Karberg & Co. have secured the contract for the supply of fittings, decorations and other supplies for the battleship fleet during its visit to Amoy.

Singapore Marine Report.—During the year 1907, 10,647 vessels with an aggregate tonnage of 14,295,028, called at this port, a decrease of 346 vessels and 173,260 tonnage compared with the previous year.

Flour Rate Advance.—At the conference of shipping companies at Seattle recently the advance of rates on flour shipments from Pacific coast ports to oriental ports from $2 to $3 a ton was discussed.

Shanghai-Tairen Service.—The service was inaugurated by the Nippon Yusen Kaisha August 10th. This service reduces the time to Harbin by railway from Dalny by two or three days rather than by Vladivostok.

Sunken Warships Located.—The search of the Japanese navy for sunken warships off Port Arthur has resulted in the locating of the Yashima, 40 nautical miles to the South of Port Arthur, and the Sebastopol, 30 miles off Laotiehshan.

Japanese Shipping Subsidies.—The manager of the Japan Shipowners Association announced recently that the ship subsidy for the year 1907 exhausted 60% of the estimated revenue from the business tax and 47% of the income tax making a total of $6,595,000 gold.

Uraga Dock Company.—Owing to the depression in shipbuilding this company has decided to reduce its expenditure and the night shift has been abandoned. The capital has also been reduced. During the year over 1200 employees have been laid of permanently.

Penang Wharves Equipment.—The legislative council has authorized the expenditure of $142,000 for the purpose of providing lighters, equipment and plant for the purpose of landing, storing and shipping cargo. Additional estimates will be submitted for added facilities in the near future.

Java-Australian Line.—The Royal Steam Packe, Company has inaugurated a service which will include Batavia, calling at the following ports: Samarang, Sourabaya, Balek-Pappan, Macassar, Banda, Dobot Thursday Island, Townsville, Brisbane, and Sydney. The vessel will then return to Batavia.

Fengtien Deep Sea Fishing Co.—This company has been transformed into a government institution and it is the purpose of the government to greatly expand the operations along the coast. Several steamers adapted to deep sea fishing will be put in commission along the coasts of Chinchow, Haicheng, Fuchow and Kaiping.

Japanese Marine Service.—According to the Journal of the Yokohama Chamber of Commerce, the total number of steamships owned in Japan at the end of May was 1,597 with a tonnage of 1,118,119. Of these 1,436 are under 5,000 tons each and 27 over that in tonnage. The number of sailing vessels were 4,291 representing a total tonnage of 359,048.

Shanghai-Hakodate Line.—It is announced that Messrs. Butterfield and Swire propose opening a new line of steamers between those two ports by transfering the Chinan, Chinchu and Anhui from the Yokohama-Shanghai line. It is not improbable that two of the vessels plying between Yokohama and Australia may carry the Shanghai-Yokohama traffic.

Davao Pearl Fisheries.—The regulation of pearl fishing so that the discoverer of beds may have the first opportunity to develop them is now agitating those interested in preserving and developing the industry in Mindanao. During the last three months over 90 tons of shell have been taken out of the Davao pearling grounds. It is proposed that the laws governing the sponge fisheries of the southern group be applied relatively to the pearling industry.

Bangkok Dock Co.—With the completion of the new ship and launch building connected with this company's equipment, the construction of a new steel lighter for the East Asiatic Co. and another of the same size for the Bombay Burma Trading Corporation will be under way. Besides there is a new steel shallow draft launch for the Siam Packet Co. and several large passenger launches for the Petriew run of the Siam Packet Co. ordered, according to the Bangkok *Times*.

U. S. Pacific Carrying Contract.—Messrs. Frank Waterhouse & Co. have secured the contract with the U. S. Quartermaster's Department for the carrying of supplies to Manila from Seattle. This covers the carrying of over 50,000 tons and the prices named in the contract are $4 a ton for forage and $10 a m feet lumber. Messrs. Jebsen & Ostranger submitted lower bids but the former got the preference for the reason that most of their vessels were American bottoms and adapted to transport service in case of emergency.

Littoral Herring Fisheries.—The import of herrings from these fisheries from last season's catch which covered the period from November to May this year follows:

Place of the Import	*Quantity.*	*Value*
Tsuruga	6,092,904	79,822 rubles
Niigata	191,750	11,783 "
Hakodate	689,800	6,248 "
Nagasaki	530,300	5,983 "
Otaru	137,000	1,284 "
Moji	63,360	643 "
Kobe	18,000	180 "
Osaka	4,500	30 "
Total	8,700,614	105,976 "

MINES, MINERALS AND THE METAL TRADE

Pinghsiang Coal Mine.—The line which the mining company proposed building from the mines to connect with the Canton-Hankow Railway.

Smelter for Kueichow.—The mining bureau at this point is constructing a smelter to handle the silver ore from mountains of Fan Dzen.

Nail and Wire Factory for Tientsin.—A company with a capital of Tls. 3,000,000 has been authorized to establish a large factory at Tientsin.

Rising Sun Oil Co.—This company is constructing a large refinery at Nishitozaki in Chikuzen province. It will refine Borneo oil and supply the Korean and Manchurian trade.

Fusan Coal Mines.—Although modern machinery has not been introduced, the South Manchurian Railway has managed to reduce the cost of mining coal from yen 4.20 to yen 2.50 a ton.

Mining in the Town of Sungei Besi.—Five large tin mines have been operating within the city limits for some time and two more are reported to be preparing to begin operations at an early date.

Hoden Oil Company.—This company has purchased the holdings of the Namboku, Fuji, Hokuyetsu, Yamato and the Niitsu Oil companies in Japan. The whole amount paid amounted to Yen 2,085,000.

Gold Discovery in Formosa.—Prospectors operating along the coast near Suinenbi report the discovery of a rich gold vein that promises great returns. Capital is being interested in its development.

Mongolia Gold Mining Company.—A company comprising English and Chinese capital has been formed to develop the gold mines at Hochiata, Chengshantze and Wutaitze. The concession has been approved by Peking.

Kalaasze Gold Mines.—A company capitalized at one million taels has been organized by Chinese and Russian capital to develop the gold deposits near Urga, the capital of Mongolia. The machinery necessary will be purchased in Russia.

Formosan Coal.—During the year 1907 the Formosan coal mines supplied 99,312 tons for home consumption including railways, steamers and factories in addition to which 25,000 tons were exported and tramp steamers took over 10,000 tons.

Japanese Wire Manufacturers Amalgamate.—The Furukawa Copper Industrial Company and the Yokohama Telegraph Wire Manufacturing Company have pooled their interests under a capitalization of yen 1,200,000, each taking half of the stock.

German Chinese Mining Co.—This company has presented a petition to the Chinese government asking that a branch of the Tientsin-Pukow be constructed to the Yi Hsien mines. The matter will be taken up definitely as soon as the surveys are completed.

Tibetan Mining Bureau.—For the purpose of investigating the immense mineral wealth of Tibet, the Peking authorities are opening negotiations with the Dalai Llama with a view to establishing a mining bureau at Tibet with some prominent official in charge.

Formosan Oil Deposits.—The northern part of Formosa is known to have very valuable oil wells and already a company has expended $150,000 in developing some of these deposits with the result that over 1,400 gallons are produced daily. The company proposes constructing a large refinery at Bioritsu.

Dredging for Tin at Tongkah.—Two large dredgers have been ordered for use in dredging the harbor as a result of the success of the initial attempts with a small dredger directed by Captain Miles. These additional dredges will be delivered in February. The novel idea of dredging the harbors of Puket, Tongkah and Junk Ceylon and secure a handsome return in tin at the same time has proven a success.

Java Iron Deposits.—Two syndicates representing £1,500,000 have secured concessions from the Dutch government to work the magnetic iron sand deposits in the province of Bayumas, Java. These deposits abound along the South coast and are mixed generally with sea sand. The syndicates intend to utilize an English invention which has been used successfully in separating the iron from the composite mixture.

Shansi Mining Company.—The Paochin Kungsu has been organized at Taiyuan with a capital of Tls. 5,000,000 for the purpose of controlling and developing the mineral wealth of Shansi. This company has taken over the properties of the Peking Syndicate at Petingchow and has ordered modern machinery for their development. Until the installation, however, the mines will be operated by Chinese methods and labor.

Pulo Laut Coal Mining Co.—This company reports a year's successful operation. The average monthly output was 6,500 tons and 48,835 tons were shipped to Singapore, Hongkong, Siam ports, Java ports and Rangoon while bunker coal to the amount of 25,000 tons were supplied steamships at Stagen. The impetus to the port of Stagen is indicated by the fact that 145 seagoing steamers and 21 coastwise called at Stagen during the year.

F. M. S. Tin Output.—The *Malay Mail* gives the output of tin for the six months ended June 30th as follows: Perak 37,333.09 pikuls tin, 232,193.90 pikuls tin ore; Selanger, 20,404.79 pikuls tin, 141,144.91 pikuls tin ore; Negri Sembilan 13,090.97 pikuls tin, 26,226.14 pikuls tin ore. Total 470,392.80 pikuls. The output for the corresponding period, 1907, was 446,321.98 including Pahang, the figures for which are not available for the first six months of this year.

Dredges for Paracale Gold Fields.—Joseph Pearson, a New Zealand expert, writes the Far Eastern Review that he is building a large dredge for Messrs. Manley, Lafferty and Gallop to be used on a placer claim on the Paracale river, Camarines, Philippine Islands. The dredge has a capacity for dredging to a depth of 50 feet. The buckets have a capacity of five cubic feet; the boiler 24 h. p. and the engines 20 h. p. He also stated that he will endeavor to have dredges built in Hongkong and Manila, in future.

FINANCIAL AND THE MISCELLANEOUS

Korean Industrial Exposition.—The Korean government is planning an exhibition on a large scale for 1910.

Formosa Census.—The increase of population in Formosa for the year is about 80,000 native and 18,000 Japanese.

Cochin-China Export.—The export of rice for the year 1907, including broken rice and rice flour, amounted to 2,206,677 tons.

Flour Mills Amalgamate.—The Dai Nippon and the Nisshin Flour mills have arranged for the merging of their respective interests.

Hankow Tea Export.—The tea guild has issued a report to the effect that the total export of tea will amount to over Tls. 1,300,000.

Silk Export.—The half-year export of silk from Yokohama is given at 21,586 bales, an increase of about 10,000 bales. This silk goes to America.

Philippine Customs Receipts.—The receipts for the month of August amounted to ₱1,036,141 against ₱1,011,127 for the corresponding month, 1907.

Bank of Communications.—Owing to the surplus applications for stock in this institution, the Board has decided to increase the capital to Tls. 10,000,000.

American Embassy at Peking.—The *Associated Press* reports that the United States government is considering raising the legation at Peking to an embassy.

Formosa Camphor Fields.—Reports from Formosa indicate that with the steady advance of the Japanese lines extensive camphor fields have been made available.

Yokohama Silk Conditioning House Exhibition.—This firm proposes giving an interesting exhibit of implements used in the silk growing industry in October.

Tibetan Trade.—The export from Tibet to India during 1907 amounted to rupees 23,90,785 and the imports rupees 14,49,701. The principal export from Tibet is wool.

Japanese Savings Banks.—During the month of July the sum of yen 1,714,650 shows the increase in deposits in the savings banks of the country making in all yen 101,877,719.

Nikkon Gas Company.—This Japan-Korea gas company has been successfully floated and a twenty-five year exclusive concession has been secured from the Korean government.

Davao Hemp.—The hemp receipts for the year up to August 31st from this colony amounted to 655,424 bales, an increase of over 24,000 bales compared with the corresponding term, 1907.

Chinese Banking School.—The Director General of the National Bank of China has established a school at Peking for the training of young men in banking methods. There are 80 students enrolled.

Soap and Candle Factory for Tientsin.—A Chinese company with a capital of Tls. 100,000 has been organized among the merchants of Tientsin for the purpose of manufacturing candles and soap for the North Chinese trade.

Cattle Raising in Borneo.—The sale of the island of Balambangan has been consummated for the purpose of raising cattle and cultivating cocoanuts. This island was once the station of the old East Indian Company, says the *Borneo Herald*.

Chinese Paper Mill.—Over one million taels will be invested in a paper mill to be established at Hankow of which 300,000 taels will be invested in the building alone. The factory will be situated on the Yiu River about 5 miles from Hankow.

Philippines Post Office Savings Bank.—The report of this institution shows ₱1,031,990 on deposit. The following investments have been made with the savings:

On time deposits in banks ₱750,000; on railroad bonds ₱249,515.55 and on mortgages ₱81,625.

Japanese Patents and Registration of Trade Marks.—The total number of patents registered since the patent laws were imposed is 8,892 of which 2,551 were taken out by foreigners. The total of trade marks is 32,436 of which 5,189 were made by foreigners.

Japanese Finance.—Reports from Tokyo indicate increased confidence in Japanese securities. American orders for short term bonds paying 7% have reached in the vicinity of five millions and Japanese capitalists are withdrawing time deposits for the same purpose.

Commercial and Savings Bank of Shanghai.—Taotai Shen Chang is promoting the establishing of a bank at Shanghai under the above style name with a capital of $1,200,000 and has received the endorsement of the Board of Finance. It is expected that the institution will soon be opened.

Korean Cotton.—The Japanese Cotton Growers Association is encouraging the cultivation of cotton in Korea with marked success. An estate of 71 hectares produced 100 bales in 1906 and experts report that if all the available land is placed under cultivation of cotton it will realize over 100,000 bales a year.

Manila Trade Report.—Messrs. Warner Barnes & Co. of Manila report depression in hemp prices owing to dull market in London and Iloilo sugar quiet. The copra and rice market continues firm and freights unchanged. First class Australian coal brings ₱10.45-10.50 exship, duty paid, with some orders booked for next year.

Yokohama Specie Bank.—This institution has decided to open branches at Rangoon, Singapore, Montreal, Vancouver, Seattle and some point in Australia. This extension has been decided upon as a result of the recommendations of Director Bekki who has been making a tour of inspection of banking methods in Europe, India and America.

Chinese Commercial Exhibitions.—The Chinese merchants of Shanghai and the treaty ports propose establishing a six months commercial exposition at Shanghai at an estimated cost of Tls. 1,000,000. Another exhibition at Tientsin on the same lines is contemplated. It is not improbable that the authorities will rebuild the Commercial Exposition Hall recently destroyed by fire at Peking.

International Rubber Exhibition.—The official opening of the exhibition in London scheduled for September 21st promises a more general participation than the most sanguine anticipation. The exhibits are from representative rubber growing areas including Ceylon, the Straits Settlements, the Federated Malay States, Java, South India, Borneo, Equatorial Africa, Mexico, Brazil, and the West Indies.

Japanese Vegetable and Fruit Export.—The report of export in these lines to America, China, Korea, Hongkong, Siberia, Straits Settlements, India, etc. shows a value of over yen 3,000,000. The principal item is the Japanese orange which heads the list in the value of yen 820,000, lily bulbs, yen 490,000, potatoes 396,000, onions, 260,000. These amounts are taken from the 1906 report and indicate the relative values of the different products exported each year.

IMPERIAL GOVERNMENT COTTON MILL.—The authorities at Peking have authorized the establishment of a cotton weaving and spinning plant to cost in the vicinity of Tls. 5,000,000 and Taotai Cho Hsueh-hsi has been appointed managing director. Several officials have been sent to Europe and America for the purpose of investigating the most modern methods and machinery. The site of the factory has not yet been chosen. The announcement is made that the Chinese government is desirous of reducing the importation of manufactured cotton by producing it at home thus encouraging home industry and giving employment to large numbers of Chinese mechanics and operators.

MANILA RAILWAY DEBENTURES.—Messrs. Speyer Brothers and the Hongkong and Shanghai Banking Corporation offer for sale £1,250,000 of Four per Cent. "A" Debenture bonds of the Manila Railway company, at the price of 83 per cent., payable as to £5 per cent on application and £78 on the 16th inst. These bonds are, in effect, a first charge on the old system of 208 miles of railway through the company's holding of the entire stock and bond capital of the Manila Railroad Company (an American company); while, in addition they will be similarly secured upon about 444 miles of new lines now under construction, which are expected to be completed by 1913. According to estimates given in the prospectus, it is expected that in 1913, the first year of the completed system of 652 miles, the net earnings will be £300,000 against a total fixed charge, on the maximum of £3,250,000 of "A" Debenture bonds, of £130,000. Estimates for the current year place the net receipts from the old system at £113,200, the charge on the "A" Debenture bonds being £68,000. The authorized capital of the company is £4,000,000, of which £2,000,000 is in Five per cent. Preference shares and £2,000,000 in Ordinary shares of £10 each, together with £3,250,000 of Four per cent. Debenture bonds and £3,250,000 of Four per cent. "B" Debentures.

*LONDON, ENGLAND, METAL MARKET

July 30, 1908.

The following are to-night's (Sept. 4) prices ¶ of metals:—

COPPER	£ s. d.	£ s. d.
*Tough cake and Ingot.	63 10 0	64 0 0
*Best Selected	64 0 0	64 10 0
*Electrolytic	65 10 0	66 10 0
*Sheets and sheathing..	75 0 0	—
*Flat bottoms	78 0 0	—
STANDARD †Cash	60 7 6	60 10 0
STANDARD †Three Months..	61 2 6	61 5 0
*Copper tubes, seamless per lb.	0 0 9½	—
*Lake	65 10 0	66 10 0

* Less 3½ per cent. † Net.

ALLOYS.		
BRASS: Wire	0 0 6¾	—
,, Tubes (solid drawn)	0 0 7¼	—
,, Sheets	0 0 7	—

TIN.		
English ingots, f. o. b.	131 0 0	132 0 0
,, bars	132 0 0	133 0 0
,, refined	133 0 0	134 0 0
Straits... Cash	131 10 0	131 12 6
Straits... Three months	132 10 0	132 15 0
Australian spot	131 10 0	132 0 0
Banka (in Holland) Cash	135 16 3	—
Banka (in Holland) Three months	135 7 6	—

LEAD.		
Spanish or soft foreign	13 1 3	13 3 9
English pig, common	13 5 0	13 7 6
,, L. B.	13 17 6	—
,, sheet and bar lead	14 7 6	—
,, pipe	14 17 6	—
,, red	16 10 0	—
,, white	18 0 0	—
,, patent shot	16 7 6	—

SPELTER.		
Silesian ordinary brands	19 5 0	19 7 6
,, special brands	19 15 0	20 0 0
English Swansea	20 0 0	20 10 0
Sheet zinc	23 0 0	—

ANTIMONY.		
Antimony Regulus	30 0 0	32 0 0
,, Crude	13 10 0	14 0 0
,, Ore (basis 50%)	8 10 0	9 10 0

QUICKSILVER.		
Flasks, 75 lbs. warrants	8 2 6	—

MANGANESE. Ore, c.i.f., U. K. ports.	Per unit.*	Per unit.*
1st quality, 50 per cent. and upwards	0 0 9½	—
2nd quality, 47 per cent. to 50 per cent	0 0 8½	—
3rd quality, 40 per cent to 47 per cent	0 0 7½	—

* Unit corresponds to 1 per cent.

ALUMINIUM.	Per lb.	Per lb.
98-99¾ per cent	0 0 9	0 1 0

NICKEL.	Per ton.	Per ton.
98-99 per cent. guaranteed	170 0 0	175 0 0

PLATINUM.

Per oz. Troy, 90s. to 85s; nominal and subject to negotiation.

---

* *Mining Journal.*

CURRENT NEW YORK WHOLESALE PRICES OF METALS, MINERALS, CHEMICALS, ETC.

Selected from the Engineering and Mining Journal

		U. S. Currency.
ABRASIVES.—		
Bort, good drill quality	carat	$ 85.00
Carborundum, grains	lb	.10-.17
Corundum	"	.07-.10
Emery, grain	"	.035-.045
Pumice Stone, American powdered	100 lbs	1.60-2 00
ACIDS.—		
Hydrochloric 20°	lb	1.25-1.50
Nitric, 38°	"	4.25-4.625
Sulphuric, 66° bulk	ton	18 00
ALUMINUM, Sulphate Com'l	lb	1.10-1 75
ANTIMONY, needle	"	.05-06
ARSENIC, white	"	05-.055
red	"	.07½-.07¾
ASPHALTUM.—		
Trinidad	ton	28.00-30.00
California	"	21.00-27.00
BLEACHING POWDER, 35%	100 lbs	1.25-1.40
BLUE VITRIOL	lb	5.00
BONE ASH	"	.02¾-.04
BORAX	"	.04½-05¼
*CAPS detonating	M	-7.50
CEMENT.—		
Portland, American	500 lbs. bbl	1.55-1.60
Foreign	" " "	2.25-2.90
Rosendale	300 " "	.85
*Green Island	375 " "	2.75
*Alsen		3.00
CLAY, CHINA.—		
American common	lg. ton	8 50-9 00
Foreign	"	10.00-17.50
*COALS.—		
Batan, at Mines	ton	3 00
Australian	"	5 50
COPPER	lb	.12½-.12⅝
*DYNAMITE 40%	"	.20
FELDSPAR ground best	sh. ton	10 50-15.00
FIRE BRICK, American	M	30.00-40 00
Imported	"	30 00-45.00
FIRE CLAY, St. Louis Mill	ton	2 50
*FUSE—Blasting	1,000 ft	7 50
GRAPHITE—Ceylon, lump	lb	.04-10
Large lump	lb	.07-.10
GYPSUM—Fertilizer	sh ton	7 00
Powdered	sh. ton	12.00-20.00
LEAD	lb	-.037
MAGNESITE-Greece, crude, 95%	lg. ton.	8.00-10 00
Bricks, domes	per M	160-200
MANGANESE, Ore, 80-85%	sh. ton	20.00-50.00
MERCURY, export flask	75 lbs	36.00-39.0
PAINTS AND COLORS.—		
Litharge American P'w'd	lb	.06¼-.06¾
Ochre, Am. Com	sh. ton	8.50-9.00
Paris green, pure, bulk	lb	.26
Turpentine, spirits, bbl	gal	.44½-4
White lead, Am. dry	lb	.05⅝-0
Am. in oil	"	.06½-.06
Zinc, white, Am. extra dry	"	.05⅝-.05
PHOSPHATES, Acid	per unit	.65-.7
Florida hard rock	lg. ton	10.25-10 5
Land pebble 68%	"	5.25-5 5
POTASSIUM Cyanide (98-99%)	lb	.18-.19
PLATINUM	oz	28.00
PLATINUM, Scrap	oz	17.00
SPELTER	lb	.045-.046
NICKEL Small lots	lb	.50-.60
*POWDER, black blasting A	lb	.15
*Judson	"	.14½
Pyrite, Domestic Non-arsenical, Lump	unit	.11-.11½
Imported non-arsenical lump	"	.12½-13
Imported, arsenical	" "	.12-.12¼
SALTPETER crude	100 lbs	4.50-5 00
SILICA, Lump quartz	lg. ton	5 00-6 00
Ground quartz, ordinary	"	13 00-15 00
Glass sand, ordinary	"	2 7
SILVER	oz	.55¼-.55
SODIUM cyanide (100% KCN)	lb	.1
*STEEL, octagon drill	lb	.
SULPHUR, Louisiana prime	lg. ton	22.
Roll	100 lbs	1 85-2.
Flowers sublimed	"	2 20-2.
TALC—Domestic	sh. ton	15.00-25.
Italian, best	"	35 00-40.
TIN	lb	.28¾-3
ZINC, Sheet	100 lb	7.
Dust	lb	.05⅜-06

*Manila quotation.

HEMP STATISTICS, 1st OCTOBER, 1908.

(Courtesy of C. S. NICHOLSON, *Secretary Manila Chamber of Commerce.)*

Arrivals of hemp at Manila up 31st Aug. 1908		480,986 *Bales*
Arrivals of hemp at Cebu up 31st Aug. 1908		174,438 *Bales*
		655,424 *Bales*
Stocks on hand in Manila and Cebu on 1st January, 1908		129,359 *Bales*
TOTAL		784,783 *Bales.*
Export to all ports to date 31-8-08	620,949 *Bales.*	
Local consumption estimated at	3,200 "	624,149 *Bales.*
Total stocks at Manila and Cebu on 1st September, 1908		160,634 *Bales.*

EXPORT OF HEMP, SEPTEMBER 1908.

Date	*Vessel*	*London*	*L'pool*	*Atlantic U. S.*	*Pacific East & California*	*Continent*	*Australia*	*Other Pts.*	*Total Bales*
	Fwd:—	192,562	80,858	223,901	50,614	39,239	11,824	21,951	620,949
Sept. 1	C. Lopez y Lopez.	1455	600			64			2119
" 3	Peleus.........Cebu	3432	2050			775			6257
" 6	Changsha		1,600				300		300
" "	Rubi							302	302
" 11	Yuensang	2988	500					300	3788
" 7	Yawata Maru						1,100		1,100
" 4	Errol			13,717					13,717
" 14	Cranley	2,000							2,000
" 15	Banca	2426	1500			3050			6976
" "	Inverio				11,939				11,939
" 14	Prinz Waldemar							166	166
" "	Empire							50	50
" 15	Tean		850			250			1,100
" 18	Loongsang					22		25	47
" "	Tringgan.....Cebu					150			150
" "	Kaifong.........do							367	367
" 16	Zafiro					410		250	660
" 24	Jeseric			17 527					17,527
" 22	Taming					540			540
" 25	Yuensang	350	2120			300		316	3086
" 26	Kumano Maru							170	170
" "	Rubi		1750			900		800	3450
" 27	Banca.........Cebu	1,000	925			1150			3075
" 29	I. de Panay		800			16			816
" 25	Sungkiang...Cebu	1450	484			600			2534
" 29	Tean					200			200
" 30	Jeseric.........Cebu			11,030					11,030
		207,663	92,437	266,175	62,553	47,666	13,224	24,697	714,415

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, for September, 1908.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	AT WORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent. per annum at Present Quotation.*	CLOSING QUOTATIONS.
BANKS.											
Hongkong & Shanghai Banking Corporation	1865	$15,000,000	120,000	$125	$125	g £1,500,000 s $14,000,000 i $250,000	$2,005,774	30-6-08	Interim of £2 for first half year—@ ex 1|9⅞=$21.942.	5¾	$775 £80
National Bank of China, Ld.	1891	£699,475	10) 99,925	£7	£6	c £4,009 $150,000	$10,223	31-12-07	$2 (London 3|6) for 1903	....	$50
MARINE INSURANCES.											
Canton Insurance Office, Ld.	1881	$2,500,000	10,000	$250	$50	$1,560,000 j $219,058 u $401,959	Nil.	31-12-06	$20 for 1906	9¼	$210 sales
North China Insurance Co., Ld.	1863	£150,000	10,000	£15	£5	g £125,000 s Tls. 100,000 f Tls. 48,942	Tls. 204,424	30-6-07	Interim of 7|6 ex 2|5¾ for 1907	6	Tls. 80 buyers
Union Ins. Society of Canton, Ld.	1867	$3,100,000	12,400	$250	$100	s $3,000,000 g £90,000 f $302,478 j £129,695 u $727,649	$2,506,011	31-12-07	Final of $15 making $45 for 1906, and interim of $30 for account 1907	5¾	$790
Yangtsze Ins. Association, Ld.	1862	$1,200,000	12,000	$100	$60	$1,000,000 j $199,032 f $85,157	$591,763	31-12-07	$12 and bonus $3 for 1906	9	$167½ sellers
FIRE INSURANCES.											
China Fire Ins. Co., Ld.	1870	$2,000,00	20,000	$100	$20	$1,000,000 x $346,097 f $13,802	$372,432	31-12-07	$6 and bonus $2 for 1906	8½	$95
Hongkong Fire Ins. Co , Ld.	1868	$2,000,000	8,000	$250	$50	$1,323,941	$428,047	31-12-07	$27 for 1906	8¼	$330
SHIPPING.											
China & Manila Steamship Co., Ld	1882	$750,000	1) 30,000	$25	$25	$7,000	$1,035	31-12-07	$1 for 1906	....	$15
Douglas Steamship Co., Ld.	1883	$1,000,000	20,000	$50	$50	$264,638 i $99,067	Nil.	30-6-08	$2½ for year ended 30-6-08	10	$34½
Hongkong, Canton & Macao Steamboat Co., Ld.	1865	$1,200,000	80,000	$15	$15	e $250,000 d. i. $587,500 f $ 81,766 $ 17,655	$17,755	30-6-08	$1½ for first half year ending 30-6-08	7¾	$28½ buyers
Indo-China Steam Navigation Co., Ld. (Preferred) Do. Do. (Deferred)	1882	m £600,000	2) 60,000 2) 60,000	£5	£5	£10,000 i £240,000	£1,375	31-12-07	6|- for 1907 on pref. shares only at ex. 1|9-11|16, $3.54	5¾	$35 $20
Shanghai Tug & Lighter Co., Ld. Do. Preference	1903	Tls. 1,500,000	20,000 10,000	Tls. 50	Tls. 50	Tls. 75,000	Tls. 14,510	31-12-07	Interim of Tls. 1¾ for % 1908	7½ 7	Tls. 47 sellers Tls. 51 buyers
"Shell" Transport & Trading Co., Ld.	1898	£ 2,000,000	2,000,000	£1	£1	£720,000 i £100,000	£63,817	31-12-07	Final of 1|- making in all 3|- for 1907 and Interim of 1|- for % 1908 (Coupon No. 10)	6	45|-
"Star" Ferry Co., Ld.	1898 1900	$200,000	10,000 10,000	$10 $10	$10 $5	$65,000 i $47,221	$98	30-4-08	$1.00 50 cts. for year ended 30-4-08	4 3½	$25 $15
Taku Tug & Lighter Co., Ld.	....	Tls. 1,500,000	12) 30,000	Tls. 50	Tls. 50	Tls. 140,000 d Tls. 609,255 e Tls. 100,000 i Tls. 116,000 q Tls. 17,142	Tls. 6,869	31-12-07	Final of Tls. 2½ making Tls. 5 for 1907	11	Tls. 45 buyers
REFINERIES.											
China Sugar Refining Co., Ld.	1878	$2,000,000	20,000	$100	$100	o $32,538 e $450,000 r $56,848	*Dr.* $279,371	31-12-07	$8 for year ending 31-12-06	....	$125
Luzon Sugar Refining Co., Ld.	1882	$700,000	7,000	$100	$100	none	*Dr.* $135,132	31-12-07	$3 for 1897	....	$ 22
Perak Sugar Cultivation Co., Ld.	....	Tls. 350,000	7,000	Tls. 50	Tls. 50	Tls. 100,000	Tls. 9,173	31-8-07	Tls. 4. (8%) for year ending 31-8-06	....	Tls. 90 buyers
MINING.											
Chinese Engineering & Mining Co., Ld.	1901	£1,000,000	1,000,000	£1	£1	d £150,000 h £12,289	£11,556	28-2-07	Interim of 1|6 (Coupon No. 10) for % 1908	7¾	Tls. 16
Raub Australian Gold Mining Co., Ld	1892	£200,000	150,000 50,000	£1 £1	18-10 £1	£4,873	*Dr.* £2,191	31-3-08	No. 12 of 1|-=48 cents	....	$7
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ld.	1889	$450,000	z 18,000	$25	$25	$53,601	$3,726	31-12-07	$1¾ for year ending 31-12-06	....	$13
Hongkong & Kowloon Wharf & Godown Co., Ld.	1886	$3,000.000	60,000	$50	$50	$550,000 t $26,806 i $40,000	$3,556	31-12-07	Final of $1½ making $3½ for 1907	7	$50
Hongkong & Whampoa Dock Co., Ld.	1866	$2,500,000	50,000	$50	$50	i $76,199 v $200 000	$384,847	30-6-08	Interim of $4 for % 1908	8¼	$94
Shanghai Dock & Engin'g Co., Ld.	1906	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	Tls. 1,000,000	Tls. 33,742	30-4-08	Final of Tls. 2½ making in all Tls. 5 for year end. 30-4-08.	6	Tls. 86 sales
Shanghai & Hongkew Wharf Co., Ld.	1902	Tls. 3,600,000	36,000	Tls. 100	Tls. 100	b Tls. 697,257 r Tls. 75,000 e Tls. 125,000	Tls. 22,626	31-12-07	Interim of Tls. 4 for % 1908	10¾	Tls. 157½ sellers
LANDS, HOTELS AND BUILDINGS.											
Anglo-French Land Investment Co., Ld.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	Tls. 25,000	Tls. 6,531	29-2-08	Tls. 6 for year ending 29-2-08	6	Tls. 100 sales
Astor House Hotel Co., Ld.	1901	$750,000	4) 30,000	$25	$25	$30,000	*Dr.* $4,200	30-6-08	$2½ for year ending 30-6-07	....	$17 sellers
Astor House Hotel, Ld. (Tientsin)	....	Tls. 200,000	4,000	Tls. 50	Tls. 50	Tls. 35,000 e Tls. 10,000	Tls. 1,013	28-2-0	20 per cent. for 1906	....	Tls. 60
Central Stores, Ld.	....	$751,845	16) 50,123	$15	$15	n. $1,000	$9,178	31-12-06	$1.80 for 1906	....	$12 sellers
Hongkong Hotel Co., Ld.	1866	$600,000	12,000	$50	$50	$648,975 r $22,000	$14,639	31-12-08	Interim of $3 for % 1908	9¾	$77
Hongkong Land Investment & Agency Co., Ld.	1889	$5,000,000	50,000	$100	$100	s $250,000	$36,915	31-12-07	Interim of $3½ for % 1908	7½	$94 sales
Humphreys' Estate & Finance Co., Ld.	1887	$1,500,000	150,000	$10	$10	i $217,426 e $50,000	$4,621	31-12-07	70 cents for 1907	7¾	$9 buyers

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCKS	WHEN ESTABLISHED	CAPITAL.	NO. OF SHARES.	VALUE.	PAID UP.	RESERVE.	AT WORKING ACCOUNT.	DATE.	LAST DIVIDEND.	Approximate Yield per cent. per annum at Present Quotation.*	CLOSING QUOTATIONS.
Kowloon Land & Bldg. Co., Ld.	1889	$300,000	6,000	$50	$30	none	$653	31-12-07	$1¾ for 1907	6½	$27
Shanghai Land Investment Co., Ld.	1888	Tls. 3,900,000	78,000	Tls. 50	Tls. 50	Tls. 1,523,045 e Tls. 170,000	Tls. 107,547	31-12-07	Interim of Tls. 3 for % 1908	7	Tls. 113 buyers
Tientsin Land Investment Co., Ld.	1902	Tls. 772,600	7,726	Tls. 100	Tls. 100	i Tls. 75,185	Tls. 811	31-12-07	Final of Tls. 3 making Tls. 6 for 1907	7	Tls. 85 buyers
West Point Bldg. Co., Ld.	1889	$625,000	12,500	$50	$50	none	$1,541	31-12-07	Interim of $2 for % 1907	9	$46
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ld.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	Tls. 150,000 Tls. 45,939	Tls. 8,807	31-10-07	Tls. 2½ for year ended 31-10-07	3¾	Tls. 66 sales
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ld.	1901	$1,250,000	125,000	$10	$10	e $20,000	$9,553	31-7-08	50 cents for year ending 31-7-08	4¾	$10½ ex div.
International Cotton Manufacturing Co., Ld.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 150,000	Tls. 85,519	30-9-07	Tls. 6 for year end. 30-9-06 (8%)	....	Tls. 60 sales
Laou-kung-mow Cotton Spinning & Weaving Co., Ld.	1895	Tls. 800,000	8,000	Tls. 100	Tls. 100	none	Tls. 6,308	31-12-07	Tls. 8 for 1906	....	Tls. 85 sellers
Soy Chee Cotton Spinning Co., Ld.	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	l Tls. 28,257	Tls. 50,663	31-12-06	Tls. 50 for 1906	....	Tls. 242½ sellers
MISCELLANEOUS.											
Bell's Asbestos Eastern Agency, Ld.	1895	£5,377.10s	11) 8,604	12-6	12/6	£1,500	£648	31-12-07	1s. 10½d. for 1907=$1.037	13½	$7½ sales
China-Borneo Co., Ld.	1903	$720,000	8) 60,000	$12	$12	$25,000	Nil.	31-12-07	$1.20 for 1907	11¾	$10¼
China Light & Power Co., Ld. Do. do. Special Shares	1901 1907	$550,000	50,000 17) 50,000	$10 $1	$10 $1	none	$25,000	28-2-07	60 cents for year ending 28-2-06	....	$6½
China Provident Loan & Mortgage Co., Ld.	1898	a $1,250,000	7) 125,000	$10	$10	$120,000	$3,593	31-12-07	80 cents for 1907	8½	$9½ sales
Dairy Farm Co., Ld.	1896	$187,500	25,000	$7½	$6	i $60,000 $5,000	$2,974	31-7-07	$1.30 for year ending 31-7-07	6½	$20 sales
Green Island Cement Co., Ld.	1889	$4,000,000	400,000	$10	$10	$12,000	$5,078	31-12-07	Interim of 40 cents for % 1908	12½	$10 sales
H. Price & Co. Ld.	1907	$120,000	19) 15,000	$10	$10	$5,000	$251	31-12-07	75 cts. for 9 months endg. 31-12-07	8	$12 buyers
Hall & Holtz, Ld.	....	$420,000	14) 21,000	$20	$20	$186,000	$8,957	28-2-08	$2 for year ending 28-2-08	10	$20 sellers
Hongkong Electric Co., Ld.	1889	$600,000	60,000	$10	$10	none	$9,321	29-2-08	$1.00 and bonus 20 cents for year ending 29-2-08	6¼	$19
Hongkong Ice Co., Ld.	1881	$125,000	5,000	$25	$25	k $120,000	$4,578	31-12-07	Interim of $4 for % 1908	8¼	$231
Hongkong Rope Manufacturing Co., Ld.	1883	$600,000	$60,000	$10	$10	none	$8,191	31-12-07	Interim of $1 for % 1908	8	$25
Maatschappij tot Mijn-, Boschen Landbouwexploitatie in Langkat	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	Tls. 547,500 i Tls. 27,603	Tls. 17,127	31-10-06	Interim of Tls. 10 for third quarter	5	Tls. 650 buyers
Peak Tramways Co., Ld. Do. (New)	1907	$750,000	25,000 50,000	$10 $10	$10 $1	$5,000	$ 7,471	30-4-08	80 cents on fully paid shares & 6 cents on $1 paid shares for year ending 30-4-08	6 4	$14 $2
Philippine Co., Ld.	1904	$750,000	75,000	$10	$10	none	none	31-12-07	None	....	$8
Shanghai Gas Co., Ld.	1903	Tls. 800,000	24,000	Tls. 50	Tls. 50	d Tls. 100,000	Tls. 6,603	31-12 07	Final of Tls. 4 making Tls. 7½ for 1907	6½	Tls. 117 buyers
Shanghai-Sumatra Tobacco Co., Ld.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 w Tls. 75,000	Tls. 8,493	31-10-07	Final of Tls. 9 making in all Tls. 14 for 1907	13	Tls. 107½ sellers
Shanghai Waterworks Co., Ld.	1881	£327,000	16,350	£20	£20	Tls. 190,000	Tls. 58,332	31-12-07	Final of 37/6 making in all 52/6 for 1907	....	Tls. 400
South China Morning Post, Ld.	1903	$150,000	6,000	$25	$25	none	Dr. $90,237	31-8-07	None	....	$25
Steam Laundry Co., Ld.	1902	$100,000	20,000	$5	$5	none	$478	31-5-07	40 cents for year ending 30-5-07	6⅔	$6
Tientsin Waterworks Co., Ld.	1901	Tls. 200,000	2,000	Tls. 100	Tls. 100	Tls. 15,259 e Tls. 4,000	Tls. 201	30-4-07	Tls. 6½ for year ending 30-4-07	....	Tls. 100
Union Waterboat Co., Ltd.	1905	$500,000	15) 50,000	$10	$10	none	$111	31-12-07	50 cents for 1907	4¾	$10½
United Asbestos Oriental Agency, Ld.	1896	$100,000	10,000	$10	$4	$35,000	$1,360	31-5-07	80 cts. on 9,900 ord shares & $19.80 on 100 founders' shares for year ending 31-5-07	6¼	$13
Watson (A. S.) & Co., Ld.	1886	$900,000	90,000	$10	$10	$300,000 e $25,000	$6,438	31-12-07	Final of 3%=30 cents making in all 60 cents for year ending 31-12-07	6	$10
Weismann Limited	1904	$17,500	175	$100	$100	$6,700	$13	31-7-07	10 per cent. for year endg 31-7-07.	....	$150
William Powell, Ld.	1901	$150,000	15,000	$10	$10	none	$41	30-6-07	Final of 30 cents making 80 cents for year ending June 30th 1906	....	$5 sales

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.	
China Government, 7 per cent. Silver Loan 1886 E.	Hongkong & Shanghai Banking Corporation.	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.	Plus interest
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899 ‡		$500,000	$500	§ all	Half yearly, June 30th and December 31st	par	
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100	....	Half yearly, June 30th and December 31st	Tls. 103½	
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100	....	Half yearly, January 1st and July 1st	102½	
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903 †	....	£500,000	¶	£431,960	Half yearly, June 30th and December 31st	par.	
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100	‖	Half yearly, March 31st and Sept. 30th	Tls. 97½.	
China Light and Power Co., Ltd. 6% Debentures of 1907 ***	....	$500,000	$100	....	Half yearly, June 30th and December 31st.	par.	

---

a Authorized capital $2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund
h Exchange Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital
n Sinking Fund.
o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account
r Repairs and Renewals Account.
s Silver Reserve Fund.
t Depreciation and Repair Account
u Underwriting Suspense Account.
v Special account
w Special Works Fund.
x Extra Reserve Fund.
y 72,560 owned by the Company.
z 7,200 shares unissued.
1 4,000 shares unissued.
2 First issue of 60,000 of which 10,411 unallotted.
3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unallotted.
6 1,616 shares unallotted.
7 75,000 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,688 shares actually issued.
12 4,200 shares unissued.
13 500 shares unissued.
14 399 shares unissued.
15 22,277 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.
18 Capital contributed by Chinese Government-Kuping Tls. 5,000,000.
19 12.000 issued only.
* Based on last year's dividend.
** Based on present dividend.
‖ Only Tls. 134,000 taken up.
§ 216 held by the Company.
¶ In certificates of £20 and £100.
‡ Redeemable in 10 years, or at option of Company, the Company giving 6 months notice.
† Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 1952.
*** Redeemable at par on 30th June, 1915.
Dr. Deficit.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	LAST DIVIDEND	WHEN PAID
Oriental Consolidated Mining Co., Ltd	27s. 6d.		G. $5,000,000	500,000	G. $10	G. $10	none	Interim of Gold cents 50 for year ended 30th June 1907	May 1908
Kiang pei-ting Coal & Iron Mine Co., Ltd	Tls. 50		Tls. 500.000	5,000	Tls. 100	Tls. 50	—	First year	—
Vulcan Iron Works, Limited	Tls. 400		Tls. 500,000	1,000	Tls. 500	Tls. 500	—	Tls. 50 for year ended 31.8.06	Nov. 1, 1906
Yangtsze Wharf & Godown Co., Limited	Tls. 125 nominal		Tls. 250,000	2,500	Tls. 100	Tls. 100	Tls. 50,000	Tls. 18 for 1907	April 16, 1908
Wei-hai-wei Land & Building Co, Limited	Tls. 10 nominal		Tls. 91,850	3,674	Tls. 25	Tls. 25	—	——	—
Union Estate & Investment Co., Limited	Y. 105 sales		Y. 1,000,000	10,000	Y. 100	Y. 100	—	First year	—
Grand Hotel, Limited	Y. 100 sellers		Y. 500,000	5,000	Y. 100	Y. 100	—	Interim Y. 5 for ½ year	Dec. 31, 1907
Hotel des Colonies Company, Limited	Tls. 9 sellers		Tls. 112,500	9,000	Tls. 12½	Tls. 12½	Tls. 29,783	6% for 1907	May 29, 1908
Kalee, Limited	$100 nominal		$100,000	4,000	$100	$100	—	$5 for 1907	May 22, 1908
Anglo-German Brewing Co., Limited	$85 buyers		$100,000	4,000	$100	$100	none	$7 for 1907	Mar. 12, 1908
Butler Tile Works, Limited	Tls. 50 nominal		Tls. 60,000	1,200	Tls. 50	Tls. 50	—	Tls. 3 for year ending 31.3.07	May 29, 1907
Major Bros, Limited	Tls. 40 sellers		Tls. 300,000	6,000	Tls. 50	Tls. 50	—	——	—
Oriental Ice Company, Limited	Tls. 50		Tls. 130,000	2,600	Tls. 50	Tls. 50	—	First year	—
Scharffs Oil and Bone Mills, Ltd	Tls. 50		Tls. 200,000	4,000	Tls. 50	Tls. 50	—	First year	—
Shanghai Ice Company, Limited	Tls. 13 sales		Tls. 200,000	8,000	Tls. 25		—	3% for 1907	Mar. 14, 1908
Shanghai Oil Co., Limited	Tls. 25		Tls 175,000	7,000	Tls. 25	Tls. 25	—	First year	—
Campbell, Moore & Co., Limited	$10 buyers		$12,000	1,200	$10	$10	$9,000	$3 for 1905	Apr. 2, 1906
Dunning & Company, Limited	$50 sellers		$100,000	2,000	$50	$50	—	$5 year ending 28 2.08	Apr. 15, 1908
J. Llewellyn & Co, Limited	$50 buyers		$72,000	1,200	$60	$60	—	$6 for 1907	May 16, 1908
Lane, Crawford & Company	$137½ sales	137½	$250,000	2,500	$100	$100	—	Final of 7% making 14% for 1907	May 25, 1908
Mondon (E. L.) Limited	Tls. 6 buyers		Tls. 225,000	9 000	Tls. 25	Tls. 25	none	——	—
S. Moutrie & Company, Limited	$48 sellers		$250,000	5,000	$50	$50	—	$4 for year ended March 31, 1908	June 18, 1908
Weeks & Company, Limited	$22 buyers		$400,000	20,000	$20	$20	$25,000	10% for year ended 28.2.08	May 30, 1908
Dominion Rubber Co., Limited	Tls. 4		Tls. 225,000	22,500	Tls. 10	Tls. 4	—	First year	—
Kalumpong Rubber Co., Ltd	Tls. 42 sellers		Tls. 700,000	14,000	Tls. 50	Tls. 50	** Tls. 11,844.48	——	—
Senawang Rubber Estates Company, Limited	Tls. 100		Tls. 250,000	2,500	Tls. 100	Tls. 100	—	——	—
Senawang Rubber Estates Company, New	Tls. 75				Tel. 100	Tls. 75			
Tebong Rubber and Tapioca Estate, Limited	20s.		£76,000	76,000	£1	£1	—	——	—
Eastern Fibre Co., Limited	Tls. 10 nominal		Tls. 300,000	30 000	Tls. 10	Tls. 10	—	——	—
Shanghai Mercury, Limited	Tls. 50 buyers		Tls. 105,500	2,100	Tls. 50	Tls. 50	—	Final of 6% making 10% for year ended 30.4-08	June 29, 1908
Shanghai Mutual Telephone Co., Limited	Tls. 57 buyers	57½	Tls. 675,000	13,500	Tls. 50	Tls. 50	—	Tls. 3 for 1907	June 28, 1908
China Export Import & Lumber Company, Limited	Tls. 92½ nominal		Tls. 350,000	500	Tls. 100	Tls. 50	—	10 p. c. for year ending 29.2.08	May 1, 1908
China Printing Co, Limited	Tls. 50		Tls. 750,000	1,500	Tls. 50	Tls. 50	—	80 cents for 1907	Jan. 30, 1908
Dallas Horse Repository Co., Ltd.	Tls. 25 nominal		Tls. 250,000	5,000	Tls. 50	Tls. 50	—	——	—
Hirano Mineral Water Co., Ltd.	Y. 15 sales		Y. 125,000	5,000	Y. 25	Y. 25	—	10%=yen 2½ for year ending 30th Sept. 07	Nov. 21, 1907
E. E. Porter & Co, Limited	$50		$100,000	2,000	$50	$50	—	$6 for 1907	Apr. 22, 1908
Shanghai Electric & Asbestos Company, Limited	$23 sales		$125,000	5,000	$25	$25	—	Final of 4% making 8% for 1907	May 29, 1908
Shanghai Electric Construction Company, Limited	£11 buyers	£11	£300,000	30,000	£10	£10	—	First year	—

DEBENTURES

LOANS		PRICE—PLUS ACCRUED INTEREST	AMOUNT OF LOAN	OUTSTANDING	NOMINAL VALUE	RATE OF INTEREST	WHEN PAYABLE
Shanghai Municipal Debentures	1892	Tls. 90	Tls. 50,000	Tls. 45,400	Tls. 100	5 %	June & Dec.
do	1893	,, 95	,, 125,000	" 47,300	" 100	5½ ,,	Do
do	1894	,, 103	,, 105,000	" 60,000	" 100	6 ,,	Do
do	1895	,, 90	,, 115,000	" 110,900	" 100	5 ,,	Do
do	1896	,, 90	,, 140,000	" 135,700	" 100	5 ,,	Do
do	1897	,, 90	,, 268,800	" 268,400	" 100	5 ,,	Do
do	1898	,, 103	,, 300,000	" 60,000	" 100	6 ,,	Do
do	1900	,, 95	,, 33,900	" 31,700	" 100	5½ ,,	Do
do	1901	,, 103	,, 250 000	" 200,000	" 100	6 ,,	Do
do	1902	,, 103	,, 150,000	" 150,000	" 100	6 ,,	Do
do	1903	,, 103	,, 490,500	" 490,500	" 100	6 ,,	Do
do	1904	,, 103	,, 214,500	" 214,500	" 100	6 ,,	Do
do	1905	,, 103	,, 320.000	" 320,000	" 100	6 ,,	Do
Chinese Imperial Government Loan	1886 E	,, 250	,, 767,200	" 354,400	" 250	7 ,,	Mar. & Sept.
Shanghai Land Investment Co., Debentures	1890	,, 102	,, 250,000	" 250,000	" 100	6 ,,	May & Nov.
do	1892	,, 95	,, 250,000	" 250,000	" 100	5½ ,,	June & Dec.
do	1894	,, 102	,, 250,000	" 250,000	" 100	6 ,,	Mar. & Sept.
do	1896	,, 90	,, 250,000	" 250,000	" 100	5 ,,	June & Dec.
do	1900	,, 102	,, 250,000	" 250,000	" 100	6 ,,	April & Oct.
do	1901	,, 102	,, 250,000	" 250,000	" 100	6 ,,	June & Dec.
do	1901	,, 95	,, 100,000	" 100,000	" 100	5 ,,	May & Nov.
do	1902	,, 102	,, 400,009	" 400,000	" 100	6 ,,	June & Dec.
do	1905	,, 102	,, 250,000	" 250,000	" 100	6 ,,	Do
Shanghai Waterworks Co., Debentures	1894	,, 102	,, 100,000	" 100,000	" 100	6 ,,	Mar. & Sept
do	1896	,, 90	,, 100,000	" 100,000	" 100	5 ,,	June & Dec.
do	1899	,, 102	,, 50,000	" 50,000	" 100	6 ,,	Do
do	1900	,, 102	,, 100,000	" 100,000	" 100	6 ,,	Mar. & Sept.
do	1902	,, 102	,, 100,000	" 100,000	" 100	6 ,,	Do
do	1903	,, 102	,, 100.000	" 100 000	" 100	6 ,,	June & Dec
Perak Sugar Cultivation Co., Debentures	1902	,, 100½	,, 200,000	" 200,000	" 100	7 ,,	April & Oct.
Shanghai Gas Co., Debentures	1897	,, 90	,, 100,000	" 100,000	" 100	5 ,,	Do
do	1899	,, 102	,, 1,000,000	" 100,000	" 100	6 ,,	May & Nov.
do	1900	,, 102	,, 2,000.000	" 200,0 0	" 100	6 ,,	June & Dec.
Shanghai and Hongkew Wharf Co., Debentures	1902	,, 102	,, 799,800	" 799,800	" 100	6 ,,	Do
Astor House Co., Debentures		,, 101	,, 500,000	¶ " 500,000	" 100	7 ,,	Do
British Municipal Council, Hankow	1901	Sh. ,, 102½	H'kow Tls 100,000	H'kow Tls 100,000	" 100	7 ,,	June & Dec.
Shanghai Club Debentures	1907	,, 96	Tls. 170 000	Tls. 170,000	" 100	6 ,,	Do
Country Club Debentures		,, 97	,, 139,000	" 139,000	" 100	6 ,,	Do
do	1907	,, 97	,, 92.000	" 92,000	" 100	6 ,,	Do
Lane Crawford & Co., Debentures	1907	,, 100	,, 110,000	" 110.000	" 100	7 ,,	Mar. & Sept.
Anglo-French Land Debentures	1908	,, 100	,, 250,000	" 250,000	" 100	6 ,,	June & Dec.

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, SEPTEMBER, 1908)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers	Sellers	Closing Quotations
								MINING			
1903	$300,000	300,000	30,000	10	10	-------	10% for year ending 31-3-08	Belat Tin Mining Co., Ltd.	6.25	7.00	6.65
1907	$300,000	225,000	22,500*y*	10	10	-------		Bruang Ltd.	6.00	6.50	6.50
1901	$600,000	600,000	60,000	10	10	25,000	10% for year ending 30-4-08	Bruseh Hydraulic Tin Mining Co., Ltd.	11.00	12.00	11.00
1903	£400,000	350,000	350,000*a*	1	1	-------		Duff Development Co., Ltd.	3.75	3.90	3.75
1907	$400,000	375,000	37,500*b*	10	10	-------		Kanaboi, Ltd.	---	4.00	4.00
1901	£60,000	60,000	60,000	1	1	-------	1/- interim for 1908	Kinta Tin Mines, Ltd.	10.00	10.75	10.00
1906	£100,000	100,000	100,000	1	1	-------		Kledang Tin Mining Co., Ltd.	3.75	4 25	4.25
1905	$150,000	99.000	9,900*c*	10	10	10,000	35% for year ending 31-12-07	Kuantan Tin Mining Co., Ltd.	---	7.00	7.00
1906	£120,000	120,000	120,000	1	1	-------		Lahat Mines Ltd.	9.75	10.25	9.75
1906	£30.000	30,000	30,000	1	1	-------		Malaya and Siam Corporation, Ltd.	---	7/6	7/6
1906	$450,000	450,000	45,000	10	10	-------		Malacca Tin Dredging Co., Ltd.	---	4.00	4.00
1906	£250,000	179,500	600,000*h*	5/-	5/-	-------		Pahang Consolidated Co., Ltd.	26/6	27/-	26/6
			100,000	1	1	-------		" " " *7% Pref*	---	---	nominal.
1907	£100,000	80,000	80,000*j**	1	1	-------		Pengkalen, Ltd	6.50	6.75	6.75
1904	£120,000	100,000	100,000*d*	1	1	6,000	45% for year ending 30-6-07	Pusing Lama Tin Mines, Ltd	---	5.25	5.25
1907	$450,000	300,000	30,000*h**	10	10	-------		Rahman Hydraulic Tin Mines, Ltd	9.50	10.00	10.00
1905	£27,000	21,750	21,750*e*	1	1	-------	1/- interim during 1907	Rambutan, Ltd	7.00	7.15	7.00
1892	£200,000	191,250	50,000	1	1	4,873	1/- paid January 1901	Raub Aust. Gold Ming. Co., Ltd, *Fully pd.*	5.00	5.10	5.00
			150,000	1	18/10	-------	1/- " " "	" " " *Contributory*	5.00	5.10	5.00
1905	£40,000	40,000	40,000	1	1	-------		Redhills Tin Mining Co., Ltd.	---	---	nominal.
1898	*Gs*2.500,000	2,500,000	25,000	100	100	-------	71% for year ending 31-12-07	Redjang Lebong Mining Co., Ltd	---	---	930.00
1900	$110,000	110,000	22,000	5	5	-------	10% for 1907	Royal Johore Tin Mining Co., Ltd	0.90	1.00	1. 00
1907	$500,000	500,000	50,000	10	10	-------		Salak South, Ltd.	8.00	8.50	8.50
1907	£80,000	80,000	80,000	1	1	-------		Sempam Tin Mines, Ltd.	2.50	3.00	3.00
1906	$850,000	850,000	85,000	10	10	25,000	7½% interim for 1908	Serendah Hydraulic Tin Ming. Co., Ltd.	6.00	6.35	6.35
1899	$230,000	230,000	23,000	10	10	-------	5% for ½ year ending 30-6-06	Sipiau Tin Co., Ltd	4.75	5.00	5.00
1907	£90,000	70,000	70,000*z*	1	1	-------		Tekka, Limited	9.75	10.15	9.75
1902	£160,000	149,185	149 185*f*	1	1	-------	5/- during 1907.	Tronoh Mines, Ltd.	9.75	10.00	9.75
								RUBBER			
1905	£150,000	137,062 10/-	46,500	1	1	-------	20% for year ending 31-12-07	Anglo-Malay Rub. Co., Ltd. *Fully paid*	4.0.0	4.5.0	4. 5 0
			103,500	1	17/6	-------		" " " *Contributory*	3.12.6	3.17.6	3.17.6.
1905	$200,000	126,000	12,600*g**	10	10	-------	12½% interim for 1907	Balgownie Rub. Estate Ltd.	15.00	---	15.00
1904	£30,000	22,750	22,750*i*	1	1	-------		Batu Caves Rub. Co., Ltd.	---	2.2.6	2. 2. 6.
1903	£70,000	66,700	66,700*j*	1	1	-------	30% for year ending 31/3/08	Bukit Rajah Rubber Co., Ltd.	4.7.6	4.12.6	4.12.6.
1906	$150.000*l*	125,000	12,500*k*	10	10	-------		Castlewood Rubber Co., Ltd.	---	9.00	9.00
1904	£16,000	16,000	10,000	1	1	-------	37½% for year ending 31-3-08	Cicely Rubber Estates Co., Ltd.	4.15.0	5.0.0	4. 10. 0.
			6,000	1	1	-------	42½% for year ending 31-3-08	" " " " *5% Pref*	4.10.0	4.17.6	4, 17. 6.
1905	£75,000	55,000	55,000*l*	1	1	-------	10% for year ending 31-12-07	Consolidated Malay Rub. Estates, Ltd	---	2.15.0	2. 15. 0.
1906	£310,000	259,530	181,454*m*	1	1	8,784	12½ % for year ending 31-12-07	Highlands & Lowds. Para Rub. Co., Ltd.	1.17.0	2.0.0	2. 0. 0.
			123,546	1	12/6	-------		" " " " *Contributory*	1.2.6	1.5.0	1. 5. 0.
1905	£65,000	53,750	50,000	1	1	-------		Kapar Para Rubber Estates, Co., Ltd	---	2.0.0	2. 0. 0.
			15,000	1	5/	-------		" " " " *Contributory*	---	1.5.0	1. 5. 0.
1906	£180,000	180,000	180,000	1	1	-------	3% interim for 1907	Kuala Lumpur Rubber Co., Ltd	1.3.0	1.6.0	1. 6. 0
1907	£320,000	201,500	184,000*d**	1	1	-------		Lanadron Rubber Estates, Ltd.	1.5.0	1.7.6	1. 7. 6.
			70,000	1	5/-	-------		" " " *Contributory*	---	10/-	10/-
1906	*Gs* 175,000	175,000	540	250	250	-------		Langen Rub. and Cocoanut Co., Ltd.	---	---	250
			160	250	250	-------		" " " " " *Deferred*	---	---	250
1906	$250,000	230 950	23,095*n*	10	10	-------		Ledbury Rubber Co., Ltd.	10.25	12.00	12.00
1895	£100,000	76,100	661,000*e**	2/-	2/-	-------	20% for year ending 31-12-07	Linggi Plantations Ltd., *Ordinary*	10/3	11/-	11/-
			10,000	1	1	-------		" " " *7% Pref*	---	---	1. 0. 0
1906	£300,000	300,000	185,000	1	1	-------	7½% for year ending 31-12-07	Malacca Rubber Plants., Ltd. 7½% *Pref.*	20/-	21/-	20/-
			140,000	1	1	-------		" " *Ordinary*	10/6	11/-	10/6
1903	£30,000	20,000	20,000*o*	1	1	-------	35% for year ending 31-12-07	Pataling Rubber Estates Synd. Ltd	5.5.0	---	5. 5. 0.
1906	$250,000	225,000	22,500*b**	10	10	-------		Ragalla Rubber Co., Ltd	---	9.00	9.00
1904	£20,000	10,035	2,588*a**	1	1	-------		Sagga Rubber Company Limited	---	---	2.10.0
			12,412	1	12/-	-------		" " " "	---	---	---
1904	$100,000	99,000	990*k**	100	100	-------	15% for year ending 31-1-08	Sandycroft Rubber Co., Ltd	225.00	250.00	250.00
1898	£30,000	30,000	300,000	2/-	2/-	-------	41% for year ending 31-12-07	Selangor Rubber Co., Ltd.	14/-	15/-	15/-
1903	$250,000	250,000	2,500	100	100	-------		Singapore & Johore Rub. Co., Ltd.	---	---	92.50
1905	$100,000	100 000	10,000	10	10	-------	7½% for year ending 30-6-07	Sione Rubber Co., Ltd.	14.00	15.00	14.00
1906	£110,000	100,000	100,000*l**	1	1	-------		Sungei Kapar Rubber Co., Ltd.	---	2.0.0	2. 0. 0
1904	£50,000	41,920	50,000 *p*	1	1	-------		Sungei Way (Selangor) Rub. Co., Ltd.	1.7.6	1.10.0	1. 10. 0
1904	£60,000	50,600	506,000*q*	2/-	2/-	-------	55% for year ending 31-3-08	Vallambrosa Rubber Co., Ltd.	12/9	13/6	12/9
								GENERAL			
1894	£5,377.10.0	4,805	7,688*c**	12/6	12/6	1,500	15% for year ending 31-12-07	Bells Asbestos Eastern Agency, Ltd.	---	5.50	5.50
1898	$225,000	225,000	4,500	50	50	132,500	15% & 2½% bon. for yr. end. 31-12-07.	Fraser & Neave, Ltd.	137.50	140.00	140.00
1865	$15,000,000	15,000,000	120,000	125	125	15,000,000*t* 14,000,000*u* 250,000*v*	£2-0-0 per share at exchange 1/9 7/8 for half year ending 30-6-08.	Hongkong & Shanghai Bank'g Corpt'n.	---	---	79 15. 0
1905	$2,400,000	2,400,000	18,000	100	---	75,000	7½% for year ending 31-10-07	Howarth Erskine, Ltd.	---	120.00	120.00
			6,000	100	---	-------	7% for year ending 31-10-07	" " *7% Pref*	---	115.00	115.00
1896	$1,000,000	1,000,000	6,000	100	100	600,000	10% for year ending 31-12-07	Katz Brothers, Ltd. *Deferred*	---	125.00	125.00
			4,000	100	100	-------	8% " " " " "	" " *8% Cum. Pref*	---	---	150.00 nominal
1901	$34,000	34,000	3,400	10	10	-------	20% for year ending 31-10-07	Maynard & Co., Ltd.	---	19.50	19.50
1899	$875,000	875,000	6.000	100	100	175,000	5% for year ending 31/12/07	Riley, Hargreaves & Co., Ltd.	---	75.00	75.00
			2,750	100	100	-------	7% for year ending 31/12/07	" " " " *7% Pref.*	100.00	102.50	102.50
1903	$600,000	240,000	24,000*r*	10	10	-------		Singapore Cold Storage Co., Ltd	6.00	6.50	6.00
1891	$30,000	30,000	600	50	50	20,000	10% for year ending 31-7-07	Singapore Dispensary Ltd.	40.00	42.50	42.50
1903	£400,000	400,000	400,000	1	1	-------		Singapore Electric Tramways, Co., Ltd.	---	4/3	4/3
1904	$160,000	112,000	1,120*f**	100	100	11.200	5% for year ending 30/6/07	Straits Engineering Syndicate Ltd.	---	45.00	45.00
1884	$200,000	200,000	2,000	100	100	35,000	10% during 1907	Straits Ice Co., Ltd	---	---	130.00
1890	$500,000	500,000	4,956*i**	100	100	400,000 458,925*w*	5% interim for 1908	Straits Steam Ship Co., Ltd.	---	192.50	192.50
1887	$3,000,000	3,000 000	300,000	10	10	1,200,000 1,197,409*x*	10% & 5% bon. for half yr. end. 31-3-08	Straits Trading Co., Ltd.	---	49.00	40.00
								DEBENTURES			
								Howarth Erskine, Ltd. 6% $ 600,000	---	2%	2% prem.
								Riley, Hargreaves & Co., Ltd. 6% 225,000	---	2%	2% prem.
								Singapore Electric Tramways, Co., Ltd. 5% 350,000	---	---	nominal
								Singapore Municipal 6% 400,000	---	---	20% prem. nom
								" " 5% 1,878,000	6%	---	6% prem.
								" " 4½% 1,600,000	2½%	5%	5% prem.
								" " 4% 602,900	---	---	5% pr. nom.
								Straits Engineering Synd. Ltd. 6% 45,000	---	---	par.
								Tanjong Pagar Dock Board 5% 1,050,000	---	---	par.

a 50,000 unissued
b 2,500 "
c 5,100 "
d 20,000 "
e 5,250 "
f 10,815 "
h 100,000 " *Ord.*
45,500 " *Pref.*
i 7,250 "
j 3,300 "
k 2,500 "
l 20,000 "
m 5,000 to be issued to employees

n 1,905 unissued.
o 10,000 "
p 8,080 "
q 94,000 "
r 36,000 "
s 465 "
t Special Gold Reserve Fund
u Silver Reserve Fund.
v Insurance Fund.
w Sundry Reserves.
x Sundry Reserves.
y 7,500 unissued.
z 20.000 "

*a** 5,000 unissued.
*b** 2,500 "
*c** 916 "
*d** 66,000 "
*e** 239,000 "
*f** 480 "
*g** 7,400 "
*h** 15,000 "
*i** 44 "
*j** 20,000 "
*k** 10 "
*l** 10,000 "

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, SEPTEMBER, 1908

STOCKS	CAPITAL.	NO. OF SHARES	ISSUE VALUE	AMOUNT PAID UP	RESERVE FUND	AT WORKING ACCOUNT OR CARRIED FORWARD	DATE	LAST DIVIDEND	FOR TERM	CLOSING QUOTATION
Brett & Co., Ltd.	-Y- 28,000	2,800	-Y- 10	-Y- 10			31-12-07	10%	for 1 year	10 Nominal.
Club Hotel, Ltd.	185,000	1,850	100	100	3,000	-Y- 768.96	31-3-08	7%	for 1 year	70 Sellers.
Grand Hotel, Ltd.	500,000	5,000	100	100	10,000		30-6-08	4%	for ½ year	100 Nominal.
Helm Bros., Ltd.	186,000	3,720	50	50	25,000	-Y- 1,682.93	31-12-07	20%	for 1 year	80 Sellers.
Langfeldt & Co., Ltd.	150,000	1,500	100	100		Dr. 4,103.41	30-6-08		for ½ year	55 Buyers.
C. Nickel & Co., Ltd. †	500,000	20,000	25	25		1,729.20	31-10-07	20%	for 1 year	41 Sellers.
Yokohama Engine and Iron Works *	500,000	10,000	50	50	50,000	-Y- 29,421.19	31-5-08	10%	for 1 year	80 Sales.
Oriental Hotel, Ltd., Ordinary	250,000	3,000	50	50	62,285.42		31-8-06	15%	for 1 year	50 Nominal.
Oriental Hotel Ltd., Preference		2,000	50	50				8%	for 1 year	50 Nominal.
The Union Estate and Investment Co., Ltd. ‡	1,000,000	10,000	100	100	3,259.65	1,774.45	30-9-07	7%	9 mos.	100 Nominal.

† 285,000 unissued.
‡ 475,000 unissued.

*-Y- 390,000 issued.
110,000 unissued.

DEBENTURE LOANS	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited	11,500.00	100.00	7%	1 June and 1 Dec.	95 Sales.
Yokohama United Club	250,000.00	100.00	7%	30 June and 31 Dec.	100 Sales.
C Nickel & Company, Limited	50,000.00	100.00	8%	1 May and 1 Nov.	110 Sellers.
Oriental Hotel, Limited	250,000.00	100.00	8%	1 April and 1 Oct.	100 Sellers.
Union Estate and Investment Co., Limited	250,000.00	100.00	6%	30 June and 31 Dec.	100 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST DIVIDEND	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 1st issue	-Y-100	-Y-100	5%	June and Dec.	-Y-100.30
Exchequer Bonds 2nd issue	100	100	5%	March and Sept.	,, 96.20
Exchequer Bonds 3rd issue	100	100	5%	March and Sept.	,, 95.20
Consolidated Bonds (Seiri)	100	100	5%	June and Dec.	,, 84.60
War Bonds (Gunji)	100	100	5%	June and Dec.	,, 84.60
Imperial 5% Bonds	100	100	5%	March and Sept.	,, 83.70
Special 5% Bonds (issued 1906)	100	100	5%	June and Dec.	,, 87.00
Yokohama Water Works Bonds	100	100	6%	June and Dec.	,, 94.50
Yokohama City Public Loan Bonds	100	100	6%	March and Sept.	,, 93.50
Osaka City Harbour Construction Bonds	100	100	6%	June and Dec.	,, 90.00
Osaka City Public Loan Bonds	100	100	6%	June and Dec.	,, 95.00
Kawasaki Dock Yards Co.'s Debentures	100	100	7%	June and Dec.	,, 95.00
Tokyo Race Associations "	500	500	30%	June and Dec.	,, 510.00
Railways & Electric Trams.					
Tokyo Railway Company Limited	50	50	7%	June and Dec.	,, 55.30
Yokohama Electric Tramway Company, Limited	50	50	6%	July and Jan.	,, 36.00
Keihin Electric Tramway Company, Limited	50	50	10%	June and Dec.	,, 63.80
Southern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	,, 25.50
Hanshin Electric Tramway Co., Ltd.	50	50	12%	May and Nov.	,, 100.00
Cotton Spinnings.					
Kanegafuchi Cotton Spinning Company, Limited	50	50	16%	July and Jan.	,, 84.20
Fuji Gassed-Yarn Company, Limited	50	50	18%	July and Jan.	,, 80.40
Tokyo Cotton Spinning Company, Limited	50	50	8%	July and Jan.	,, 32.50
Imperial Hemp Weaving Company, Limited	50	50	12%	July and Jan.	,, 52.40
Nisshin Boseki Kabushiki Kaisha	50	12½	....	——	,, 7.00
Sugar & Beer Cos.					
Dai-nippon Sugar Refinery Company, Limited	50	50	15%	May and Nov.	,, 74.80
Ensuiko Sugar Refinery Company, Limited	50	15	20%	June and Dec.	,, 24.75
Dai-nippon Beer Company, Limited	50	50	15%	July and Jan.	,, 75.90
Kirin Brewery Company, Limited	50	50	8%	July and Jan.	,, 58.00
Docks & Steamships.					
Yokohama Dock Company Limited	50	33	12%	June and Dec.	,, 52.50
Uraga Dock Company, Limited	50	50	....	July and Jan.	,, 10.00
Kawasaki Dockyard Company, Limited	50	50	12½%	Feb. and Aug.	,, 60.00
Nippon Yusen Kaisha	50	50	12%	May and Nov.	,, 79.15
Hokkaido Tanko S. S. Company, Limited	50	50	14%	July and Jan.	,, 85.70
Miscellaneous					
Tokyo Electric Light Company, Limited	50	50	10%	June and Dec.	,, 68.00
Tokyo Gas Company, Limited	50	50	13%	July and Jan.	,, 80.00
Yokohama Union Electric Light Company, Limited	50	50	14%	July and Jan.	,, 69.50
Fuji Paper Mills	50	50	6%	June and Dec.	,, 36.00
Otaru Timber Company, Limited	50	50	....	March and Sept.	,, 16.00
Hoden Petroleum Company, Limited	50	50	36%	April and Oct.	,, 125.00
Tokyo Rope Manufacturing Company, Limited	50	50	20%	June and Dec.	,, 87.00
Japan Horse Improvement Company, Limited	50	50	15%	March and Sept.	,, 40.50
Tokyo Stock Exchange Company	50	50	10%	June and Dec.	,, 114.70
Osaka Electric Light Company, Limited	50	50	15%	July and Jan.	,, 116.50
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	,, 77.00

BANGKOK QUOTATIONS

(COURTESY MESSRS EDWARDS & CO., BANGKOK, SIAM.)

NAME.	BUYERS.	SELLERS.	QUOTATION.	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND	WHEN PAID OR PAYABLE.
Siam Electricity Co., Ltd.	Tcs. —	Tcs. 505	Tcs. 505	1901	£ 300,000	30,000	£ 10	£ 300,000	Tcs. 418,174.31	12% & 12½ T. bon.	Feb. 29, 1908
Paknam Railway Co., Ltd	,, 200	,, —	,, 210	1893	Tcs. 400,000	5,000	Tcs. 80	Tcs. 400,000	,, 80,000	6% & 2 Tcl. bonus for ½ year ending	Dec. 31, 1906
Siam Tramway Co., Ltd	,, 160	,, 168	,, 168	1905	,, 1,450,000	6250 Shares 7250 Deb. 1000 P. Shares	,, 100	,, 1,450,000	—	2%	Mar. 31, 1907 Sept. 30, ,,
Meklong Railway Co., Ltd.	,, 124	,, 127	,, 129	July 12, 1907	,, 2,230,000	22,300	,, 100	,, 2,230,000	17,316.22	2½%	Dec. 31, 1907
Bangkok Manufact. Co, Ltd.	,, 145	,, —	,, 160	1898	,, 400,000	4,000	,, 100	,, 400,000	—	None	June 30, 1907 Dec. 31, ,,
Howarth Erskine, Ltd.	,, —	,, —	,, 235	1905	$ 2,400,000	24,000	$ 100	$ 2,400,000	$ 40,000	7½%	Oct. 31, 1907
Bangkok Dock Co., Ltd.	,, —	,, —	,, 305	1865	Tcs. 666,666	4,000	Tcs. 166⅔	Tcs. 666,666	Tcs. 270,000 60,000	12½% & 2½ Bonus	Dec. 31, 1907
Siam Steam Packet Co.	,, —	,, 100	,, 100	1898	,, 131,250	2,625	,, 50	,, 131,250	,, 36,000	14%	Dec. 31, 1907
Siam Commercial Bank	,, 1,350	,, 1,450	,, 1,450	1906	,, 3,000,000	3,000	,, 1,000	,, 3,000,000	,, 140,000	5%	Mar. 31, 1908
Menam Motor Boat Co.	,, 130	,, —	,, 140	1905	,, 200,000	2,000	,, 100	,, 125,000	—	5%	July 31, 1907
Jenderata Rubber Co.	,, 65	,, 70	,, 70	1906	£ 40,000	4,000	£ 10	£3, per Share	—	None	—
Langsuan Tin Mine Co.	,, —	3/	4/	1905	£ 170,000	170,000	£ 1	£ 60,000	—	—	—